Appendices Section

- ***Appendix A. Mission Valley Transportation***
- ***Appendix B. Implementation Program***
- ***Appendix C. Mission Valley Traffic Forecast***
- ***Appendix D. Department of Water Resources Recommendations for Water Conservation and Water Reclamation***
- ***Appendix E. Department of Water Resources Recommendations for Flood Damage Prevention***
- ***Appendix F. Acceptable Plant Species for Mission Valley***
- ***Appendix G. ~~San Diego River Wetlands Management Plan~~***
- ***Appendix ~~H~~G. Mission Valley Unified Planning Committee Plan and Implementation Alternative. Proposed CA-2 Zoning Ordinance (Concept 8)***

Appendix A

APPENDIX A

MISSION VALLEY TRANSPORTATION

TABLE A-1
MISSION VALLEY EQUIVALENT DWELLING UNIT (EDU) FACTORS

LAND USE	EDU
Single-family residential (du)	1.00
Multi-family, under 30 du/acre	0.80
Multi-family, 30 or more du/acre	0.60
Large Commercial Office (1,000 sq. ft.)	1.60
Small Commercial Office (1,000 sq. ft.)	2.00
Small Industry (1,000 sq. ft.)	1.40
Large Industry (1,000 sq. ft.)	0.80
Small Industry/Business Park (1,000 sq. ft.)	1.80
Neighborhood Commercial Center (1,000 sq. ft.)	15.00
Community Commercial Center (1,000 sq. ft.)	7.00
Small Regional Commercial Center (1,000 sq. ft.)	6.00
Large Regional Commercial Center (1,000 sq. ft.)	3.00
Freestanding Retail (1,000 sq. ft.)	4.00
Quality Restaurant (1,000 sq. ft.)	10.00
Sit-down Restaurant (1,000 sq. ft.)	37.00
Fast Food Restaurant (1,000 sq. ft.)	77.00
Theatre (seat)	0.04
Government Office (1,000 sq. ft.)	4.00
Medical Office (1,000 sq. ft.)	9.00
4-year College Student	0.28
Savings and Loan (1,000 sq. ft.)	7.40
Bank (1,000 sq. ft.)	20.00
Hotel/Motel (room)	1.00
Health Club (1,000 sq. ft.)	4.50

LEGEND

COMMUNITY ENTRANCES

LANDMARK/VIEW SENSITIVE AREAS

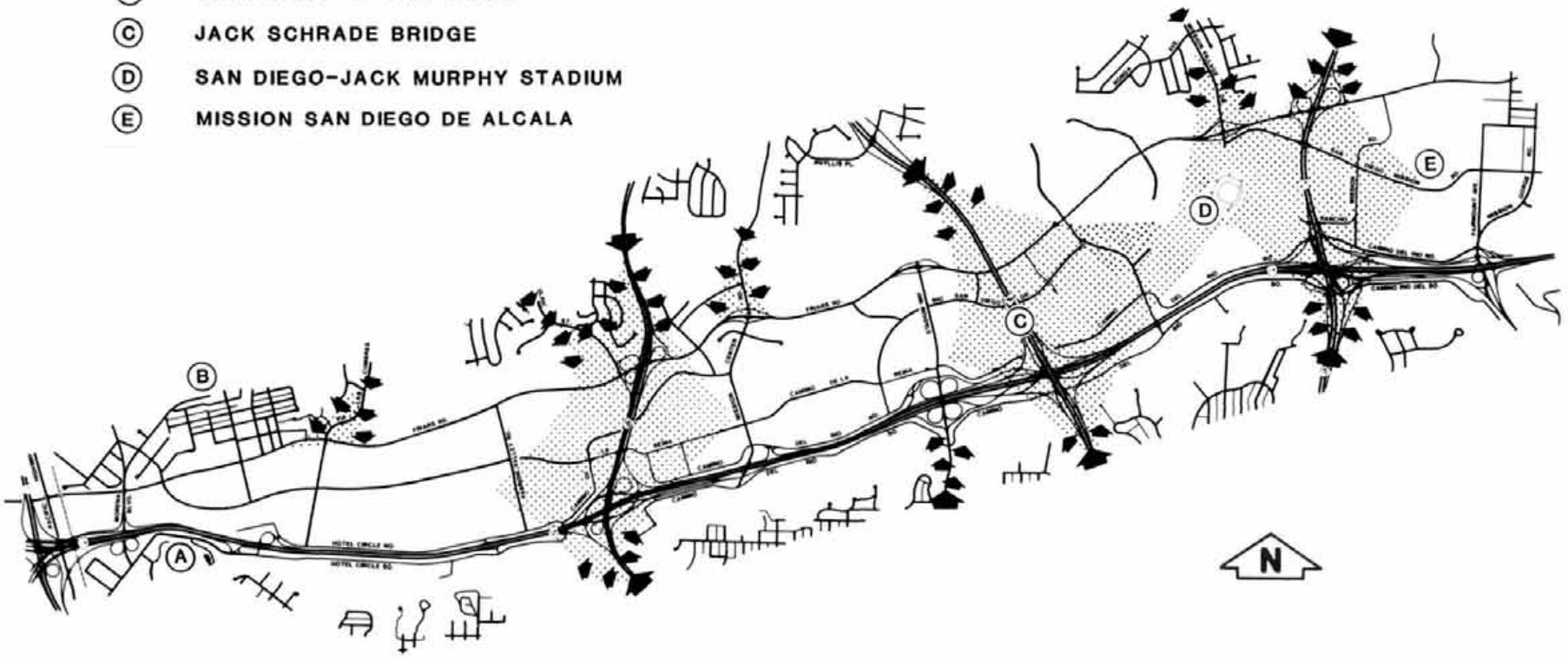
Ⓐ PRESIDO

Ⓑ UNIVERSITY OF SAN DIEGO

Ⓒ JACK SCHRADE BRIDGE

Ⓓ SAN DIEGO-JACK MURPHY STADIUM

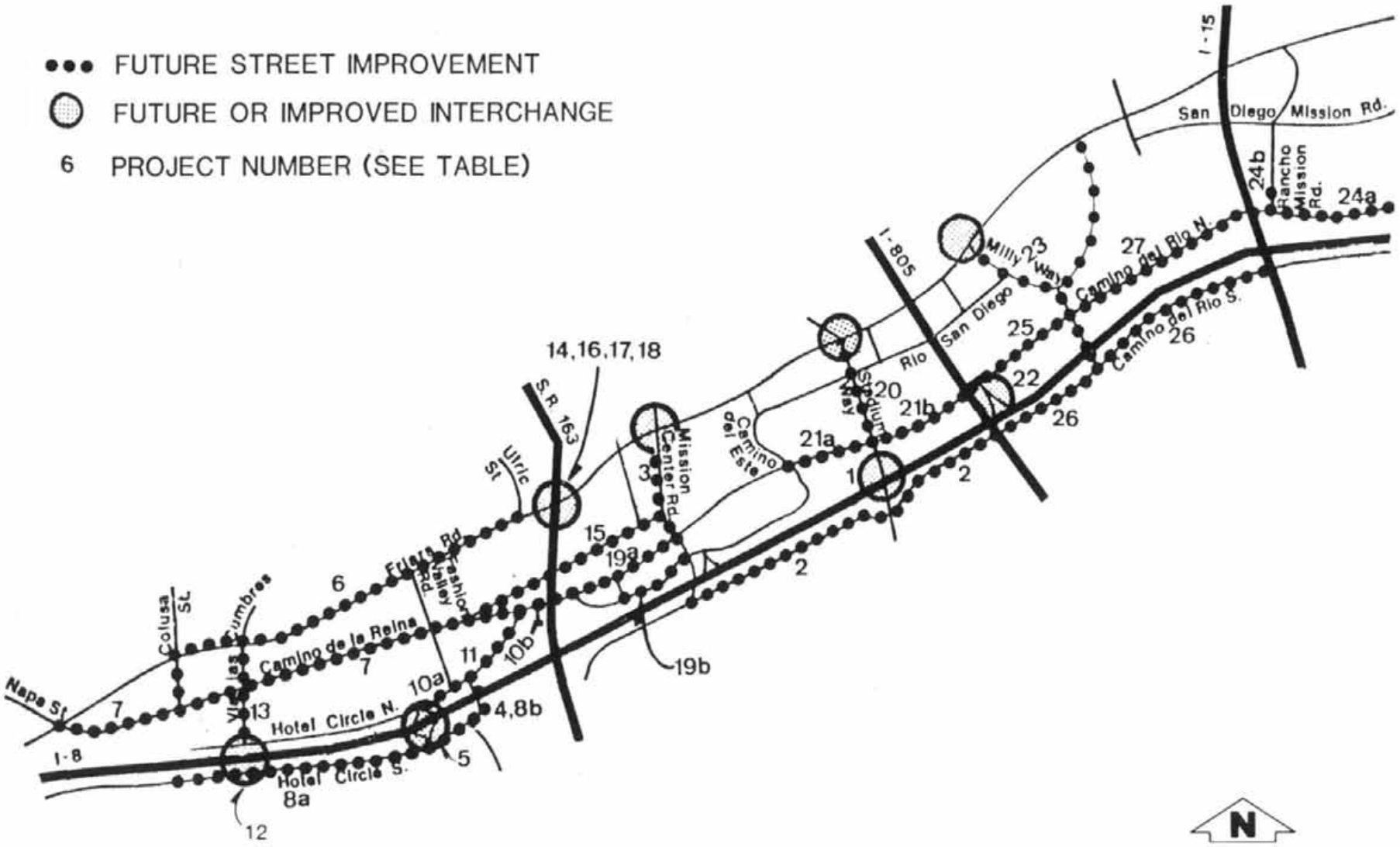
Ⓔ MISSION SAN DIEGO DE ALCALA



Implementation Phasing Sectors

Mission Valley Community Plan

A1 FIGURE



Future Street Improvements
Mission Valley Community Plan
A2 FIGURE

TABLE A-2
MISSION VALLEY PHASING OF TRANSPORTATION IMPROVEMENTS

EDU	GROUP	SECTOR	PROJECT	LOCATION	IMPROVEMENT
	A		2	Camino del Rio So.	Widen to four lanes, Mission Center Rd. to I-805
	A		3	Mission Center Rd.	Widen to six lanes, Friars Rd. to Camino del Rio No. Includes improving interchange ramps at the Friars Rd. interchange.
	A		4	Hotel Circle So.	Restripe to three lanes and prohibit parking from the eastbound Hotel Circle interchange ramps to Camino de la Reina.
	A		5	Hotel Circle/I-8 ramps	Provide increased intersection capacity and signalization at both the eastbound and westbound ramps.
400	B	1	6	Friars Road	Restripe for six lanes, Colusa Street to Ulric St.
1,500	B	1	7	Camino de la Reina	Construct as a four-lane major between Napa Street and Fashion Valley Road.
200	C	3	8A	Hotel Circle So.	Remove parking and restripe for three lanes between the I-8/Presidio overcrossing and the eastbound Hotel Circle Ramps.
200	C	3	8B	Hotel Circle So.	Widen to four lanes between eastbound Hotel Circle ramps and Camino de la Reina.
400	C	3	9	Hotel Circle So.	Widen to four lanes between eastbound Presidio ramps and the I-8/Presidio overcrossing.
200	D	4	10A	Hotel Circle No.	Widen to four lanes between westbound I-8 ramps and Camino de la Reina.
3,000	E	1, 3	12	Via las Cumbres interchange	Construct when Via las Cumbres is connected or when listed EDUs are developed. (Approximately 75% of buildout in these sectors.)
1,500	F	1-4	13	Via las Cumbres	Construct between Friars Road and Hotel Circle North.
7,500	F	1-4	16	SR-163 and Friars Rd.	Construct new southbound-westbound off-ramp.
500	G	1, 2, 4-7	14	SR-163 and Friars Rd.	Add dual lefts for eastbound-northbound on-ramps; widen north leg of intersection to accept two turning lanes.

TABLE A-2
MISSION VALLEY PHASING OF TRANSPORTATION IMPROVEMENTS (cont.)

EDU	GROUP	SECTOR	PROJECT	LOCATION	IMPROVEMENT
12,000	G	1, 2, 4-7	15	Hazard Center Rd.	Improve to a four-lane major street along north side of river between Fashion Valley Road and Mission Center Road.
4,700	G	1, 2, 4-7	17	SR-163 and Friars Rd.	Cut back median on bridge to allow three westbound lanes through signal for northbound on-ramps; approximately 85% of buildout in these sectors.
18,000	G	1, 2, 4-7	18	SR-163 and Friars Rd.	Move northbound on-ramps eastward or replace with a loop or flyover; approximately 95% build-out in these sectors.
400	H	5, 7	19A	Camino de la Reina	Widen to four-lane major, SR-163 to Mission Center Road.
400	H	5, 7	19B	Camino del Rio No.	Restripe for three lanes, Camino del Arroyo Mission Center Road.
200	I	6, 8	20	Stadium Way	Widen to six lanes between Friars Road and Camino del Rio North; improve interchange for all moves at Friars Road.
500	J	8	21A	Camino de la Reina	Widen to four lanes, Camino del Este to Stadium Way.
500	J	8	21B	Camino del Rio No	Widen to four lanes, Stadium Way to I-805.
500	K	6, 8, 11	22	Westbound I-8 ramps to/from Camino del Rio No.	Construct in the vicinity of I-805.
1,000	L	9-12	23	Milly Way	Construct between Friars Rd. and Camino del Rio No.; build interchange at Friars Rd.
3,000	L	9-12	24A	Camino del Rio No.	Widen to four lanes between I-15 and Fairmount Ave.
3.000	L	9-12	24B	Rancho Mission Rd.	Extend south across San Diego River to Camino del Rio No.
800	M	11	25	Camino del Rio No.	Widen to four lanes, I-805 to Milly Way.
300	N	11, 12	26	Camino del Rio No.	Widen to four lanes, I-805 to I-15.
700	N	11, 12	27	Camino del Rio No.	Widen to four lanes, Milly Way to I-15.

*Total cumulative EDUs in sector(s) indicated that are not contained in tentative or final maps approved prior to 5/3/82.

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Appendix B

APPENDIX B

IMPLEMENTATION PROGRAM

TABLE B-1
IMPLEMENTATION CHART

Projects	CITY		LOCAL AGENCY				PRIVATE	
	Zoning Legislation	Rezonings	C.I.P.	Trans-portation (MTDB/ SDT)	State	Federal	Streets	Floods	Condition Subdivision Permit
Circulation									
1. Texas Interchange					X	X			
2. Camino del Rio So. (Mission Center Rd. to I-805)							X		
3. Mission Center Rd. (Friars Rd. to Camino del Rio No.)							X		X
4. Hotel Circle So.							X		
5. Hotel Circle/l-8 Ramps									
6. Friars Road			X						
7. Camino de la Reina (Napa to Fashion Valley Rd.)							X		X
8A. Hotel Circle So.			X						
8B. Hotel Circle So.							X		
9. Hotel Circle So.							X		
10A. Hotel Circle So.							X		
10B. Camino de la Reina (Fashion Valley Rd. to SR-163)							X		
11. Camino de la Reina (widen/existing)							X		
12. Presidio Interchange							X		
13. Colusa St. or Via las Cumbres							X		
14. SR-163 and Friars Rd.							X		
15. New St. (between Fashion Valley Rd. and Mission Center Rd.							X		X
16. SR-163 and Friars Rd.							X		
17. SR-163 and Friars Rd.							X		

TABLE B-1
IMPLEMENTATION CHART (cont.)

Projects		CITY		LOCAL AGENCY				PRIVATE	
		Zoning Legislation	Rezonings	C.I.P.	Trans-portation (MTDB/ SDT)	State	Federal	Streets	Floods	Condition Subdivision Permit
18.	SR-163 and Friars Rd.							X		
19A.	Camino de la Reina (SR-163 to Mission Center Rd.)							X		X
19B.	Camino del Rio No. (Camino del Arroyo to Mission Center Rd.)			X						
20.	Stadium Way									X
21A.	Camino de la Reina (Camino del Este to Stadium Way)								X	X
21B.	Camino del Rio No. (Stadium Way to I-805)									X
22.	Westbound I-8 Ramps to/from Camino del Rio No. (I-805 area)							X		
23.	Milly Way (Friars Rd. to Camino del Rio No.)							X		X
24A.	Camino del Rio No. (I-15 to Fairmount Ave.)					X	X			
24B.	Rancho Mission Rd. (extend to Camino del Rio No.)					X	X			
25.	Camino del Rio No. (I-805) to Milly Way)							X		
26.	Camino del Rio So. (I-805 to I-15)							X		
27.	Camino del Rio No. (Milly Way to I-15) *See Phasing Chart for detailed explanations of all items.							X		
Development Intensity										
1.	Implementing Legislation	X								
2.	Formulation of Development Intensity Districts	X								

TABLE B-1
IMPLEMENTATION CHART (cont.)

Projects	CITY		LOCAL AGENCY				PRIVATE	
	Zoning Legislation	Rezonings	C.I.P.	Trans-portation (MTDB/ SDT)	State	Federal Streets	Floods	Condition Subdivision Permit
3. Application of Implementing Legislation and Development Intensity Districts		X						
San Diego River								
1. Flood Control Facility							X	
2. Wetlands Maintenance Programs	X				X	X		
Hillsides								
1. Development Regulations	X	X						
Parking and Goods Delivery								
1. Establish parking regulations	X							
2. Establish delivery area regulations	X							
Public Transit								
1. Establish new intra-Valley bus routes				X				
2. Establish intra-Valley “People-Mover” System				X				
3. Establish LRT line through Valley				X				
4. Establish Bikeway System			X					
Community Facilties								
1. Fire Station			X			X		
2. Water and Sewer			X					X

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Appendix C

APPENDIX C

MISSION VALLEY TRAFFIC FORECAST

TABLE C
LAND USE CHANGES – JUNE 20, 1983*

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
149	Single-Family Residential	1,213 D.U.	1,213 D.U.	1,213 D.U.	1,213 D.U.
	Condominiums	53 D.U.	53 D.U.	53 D.U.	53 D.U.
	Apartments	53 D.U.	53 D.U.	53 D.U.	53 D.U.
150	Single-Family Residential	567 D.U.	567 D.U.	567 D.U.	567 D.U.
	Condominiums	283 D.U.	283 D.U.	283 D.U.	283 D.U.
	Apartments	284 D.U.	284 D.U.	284 D.U.	284 D.U.
	Neighborhood Shopping Ctr.	14,693 sq. ft.	14,693 sq. ft.	14,693 sq. ft.	14,693 sq. ft.
	Freestanding Retail	49,140 sq. ft.	49,140 sq. ft.	49,140 sq. ft.	49,140 sq. ft.
	Small Commercial Office	18,650 sq. ft.	18,650 sq. ft.	18,650 sq. ft.	18,650 sq. ft.
	Government Office	7,050 sq. ft.	7,050 sq. ft.	7,050 sq. ft.	7,050 sq. ft.
	Service Station	3 pumps	3 pumps	3 pumps	3 pumps
	Savings and Loan	6,536 sq. ft.	6,536 sq. ft.	6,536 sq. ft.	6,536 sq. ft.
	Small Industrial	11,800 sq. ft.	11,800 sq. ft.	11,800 sq. ft.	11,800 sq. ft.
	Church	1	1	1	1
	Jr. High School	280 Students	280 Students	280 Students	280 Students
	Elementary School	175 Students	175 Students	175 Students	175 Students
	Park	6.68 Acres	6.68 Acres	6.68 Acres	6.68 Acres
151	Single-Family Residential	550 D.U.	550 D.U.	550 D.U.	550 D.U.
	Condominiums	275 D.U.	275 D.U.	275 D.U.	275 D.U.
	Apartments	275 D.U.	275 D.U.	275 D.U.	275 D.U.
	Church	1 Acre	1 Acre	1 Acre	1 Acre
	Convalescent Hospital	2,408 Beds	2,408 Beds	2,408 Beds	2,408 Beds
165	Single-Family Residential	695 D.U.	695 D.U.	695 D.U.	695 D.U.
	Condominiums	762 D.U.	762 D.U.	762 D.U.	762 D.U.
	Apartments	762 D.U.	762 D.U.	762 D.U.	762 D.U.
166	Single-Family Residential	395 D.U.	395 D.U.	395 D.U.	395 D.U.
	Condominiums	1,142 D.U.	1,142 D.U.	1,142 D.U.	1,142 D.U.
	Apartments	1,142 D.U.	1,142 D.U.	1,142 D.U.	1,142 D.U.
	Freestanding Retail	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.
167	Single-Family Residential	303 D.U.	303 D.U.	303 D.U.	303 D.U.
	Condominiums	592 D.U.	592 D.U.	592 D.U.	592 D.U.
	Apartments	593 D.U.	593 D.U.	593 D.U.	593 D.U.
	Neighborhood Shopping Ctr.	7,201 sq. ft.	7,201 sq. ft.	7,201 sq. ft.	7,201 sq. ft.
	Freestanding Retail	61,308 sq. ft.	61,308 sq. ft.	61,308 sq. ft.	61,308 sq. ft.
	Small Commercial Office	33,582 sq. ft.	33,582 sq. ft.	33,582 sq. ft.	33,582 sq. ft.
	Small Industrial	22,545 sq. ft.	22,545 sq. ft.	22,545 sq. ft.	22,545 sq. ft.
	Church	4	4	4	4
	High School	500 students	500 students	500 students	500 students

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
177	Single-Family Residential	1,067 D.U.	1,067 D.U.	1,067 D.U.	1,067 D.U.
	Condominiums	297 D.U.	297 D.U.	297 D.U.	297 D.U.
	Apartments	297 D.U.	297 D.U.	297 D.U.	297 D.U.
178	Single-Family Residential	1,513 D.U.	1,513 D.U.	1,513 D.U.	1,513 D.U.
	Condominiums	158 D.U.	158 D.U.	158 D.U.	158 D.U.
	Apartments	159 D.U.	159 D.U.	159 D.U.	159 D.U.
254	Small Commercial Office	152,800 sq. ft.	152,800 sq. ft.	152,800 sq. ft.	152,800 sq. ft.
	Freestanding Retail	108,638 sq. ft.	108,638 sq. ft.	108,638 sq. ft.	108,638 sq. ft.
	Neighborhood Shopping Ctr.	16,503 sq. ft.	16,503 sq. ft.	16,503 sq. ft.	16,503 sq. ft.
	Large Industrial	239,000 sq. ft.	239,000 sq. ft.	239,000 sq. ft.	239,000 sq. ft.
	Service Station	6 Pumps	6 Pumps	6 Pumps	6 Pumps
	Sit-down Restaurant	7,600 sq. ft.	7,600 sq. ft.	7,600 sq. ft.	7,600 sq. ft.
	Condominiums	1,000 D.U.	1,000 D.U.	1,000 D.U.	1,000 D.U.
	Apartments	1,930 D.U.	1,930 D.U.	1,930 D.U.	1,930 D.U.
	High School	1,300 Students	1,300 Students	1,300 Students	1,300 Students
	Single-Family Residential	910 D.U.	910 D.U.	910 D.U.	910 D.U.
	Fast-Food Restaurant	1,050 sq. ft.	1,050 sq. ft.	1,050 sq. ft.	1,050 sq. ft.
	Medical Office	2,825 sq. ft.	2,825 sq. ft.	2,825 sq. ft.	2,825 sq. ft.
	Government Office	48,123 sq. ft.	48,123 sq. ft.	48,123 sq. ft.	48,123 sq. ft.
	Church	6	6	6	6
	4-Year College (U.S.D.)	5,200 Students	5,200 Students	5,200 Students	5,200 Students
	High School (Twain Cont.)	450 Students	450 Students	450 Students	450 Students
260	Apartments	1,023 D.U.	—	—	—
	Condominiums	—	1,023 D.U.	1,023 D.U.	1,023 D.U.
262	Small Industrial	80,000 sq. ft.	66,875 sq. ft.	66,875 sq. ft.	66,875 sq. ft.
	Small Commercial Office	—	80,000 sq. ft.	80,000 sq. ft.	80,000 sq. ft.
	Service Station	6 Pumps	—	—	—
	Health Club (Y.M.C.A.)	24,715 sq. ft.	24,715 sq. ft.	24,715 sq. ft.	24,715 sq. ft.
	Government Office (Police)	16,000 sq. ft.	16,000 sq. ft.	16,000 sq. ft.	16,000 sq. ft.
263	Freestanding Retail	140,542 sq. ft.	140,542 sq. ft.	121,990 sq. ft.	121,990 sq. ft.
	Hotel/Motel	1,170 Rooms	1,170 Rooms	1,170 Rooms	1,170 Rooms
264	Small Commercial Office	160,420 sq. ft.	176,550 sq. ft.	176,550 sq. ft.	176,550 sq. ft.
	Hotel/Motel	1,091 Rooms	1,091 Rooms	1,091 Rooms	1,091 Rooms
	Apartments	255 D.U.	255 D.U.	255 D.U.	255 D.U.
	Single-Family Residential	3 D.U.	3 D.U.	3 D.U.	3 D.U.
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps
	Quality Restaurant	18,000 sq. ft.	18,000 sq. ft.	18,000 sq. ft.	18,000 sq. ft.
	Sit-Down Restaurant	5,000 sq. ft.	—	—	—
266	Single-Family Residential	814 D.U.	814 D.U.	814 D.U.	814 D.U.
	Condominiums	302 D.U.	302 D.U.	302 D.U.	302 D.U.
	Apartments	303 D.U.	303 D.U.	303 D.U.	303 D.U.

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
267	Single-Family	1,568 D.U.	1,568 D.U.	1,568 D.U.	1,568 D.U.
	Condominiums	271 D.U.	271 D.U.	271 D.U.	271 D.U.
	Apartments	272 D.U.	272 D.U.	272 D.U.	272 D.U.
	Neighborhood Shopping Ctr.	18,465 sq. ft.	18,465 sq. ft.	18,465 sq. ft.	18,465 sq. ft.
	Small Industrial	63,836 sq. ft.	63,836 sq. ft.	63,836 sq. ft.	63,836 sq. ft.
	Church	1.74 Acres	1.74 Acres	1.74 Acres	1.74 Acres
	Elementary School	887 Students	887 Students	887 Students	887 Students
	Park	115.6 Acres	115.6 Acres	115.6 Acres	115.6 Acres
270	Single-Family Residential	791 D.U.	791 D.U.	791 D.U.	791 D.U.
	Condominiums	41 D.U.	41 D.U.	41 D.U.	41 D.U.
	Apartments	41 D.U.	41 D.U.	41 D.U.	41 D.U.
	Neighborhood Shopping Ctr.	42,318 sq. ft.	42,318 sq. ft.	42,318 sq. ft.	42,318 sq. ft.
	Elementary School	421 Students	421 Students	421 Students	421 Students
	Park	9.4 Acres	9.4 Acres	9.4 Acres	9.4 Acres
	Church	1.15 Acres	1.15 Acres	1.15 Acres	1.15 Acres
271	Single-Family Residential	233 D.U.	233 D.U.	233 D.U.	233 D.U.
	Condominiums	88 D.U.	88 D.U.	88 D.U.	88 D.U.
	Apartments	88 D.U.	88 D.U.	88 D.U.	88 D.U.
	Neighborhood Shopping Ctr.	5,824 sq. ft.	5,824 sq. ft.	5,824 sq. ft.	5,824 sq. ft.
	Small Industrial	14,247 sq. ft.	14,247 sq. ft.	14,247 sq. ft.	14,247 sq. ft.
	Church	1.98 Acres	1.98 Acres	1.98 Acres	1.98 Acres
	Park	24 Acres	24 Acres	24 Acres	24 Acres
272	Large Commercial Office	238,750 sq. ft.	477,500 sq. ft.	467,280 sq. ft.	250,000 sq. ft.
	Small Commercial Office	238,750 sq. ft.	—	—	—
	Freestanding Retail	80,000 sq. ft.	80,000 sq. ft.	78,290 sq. ft.	247,000 sq. ft.
	Hotel/Motel	285 Rooms	285 Rooms	280 Rooms	—
	Apartments	250 D.U.	250 D.U.	245 D.U.	300 D.U.
	Health Club	—	5,000 sq. ft.	4,890 sq. ft.	—
273	Large Commercial Office	465,000 sq. ft.	930,000 sq. ft.	930,000 sq. ft.	930,000 sq. ft.
	Small Commercial Office	465,000 sq. ft.	—	—	—
274	Stadium	51,000 Seats	—	—	—
	Small Industrial	12,000 sq. ft.	12,000 sq. ft.	12,000 sq. ft.	12,000 sq. ft.
	Small Commercial Office	379,190 sq. ft.	48,006 sq. ft.	48,006 sq. ft.	48,006 sq. ft.
	Large Commercial Office	379,190 sq. ft.	530,866 sq. ft.	530,866 sq. ft.	530,866 sq. ft.
275	Quality Restaurant	15,000 sq. ft.	15,000 sq. ft.	15,000 sq. ft.	15,000 sq. ft.
	Small Commercial Office	7,100 sq. ft.	7,100 sq. ft.	7,100 sq. ft.	7,100 sq. ft.
	Apartments	40 D.U.	40 D.U.	40 D.U.	40 D.U.
	Hotel/Motel	550 Rooms	550 Rooms	550 Rooms	550 Rooms
276	Small Commercial Office	118,500 sq. ft.	82,922 sq. ft.	82,922 sq. ft.	82,922 sq. ft.
	Skateboard Park	3.97 Acres	—	—	—
	Quality Restaurant	20,000 sq. ft.	20,000 sq. ft.	20,000 sq. ft.	20,000 sq. ft.
	Large Commercial Office	118,500 sq. ft.	160,00 sq. ft.	160,00 sq. ft.	160,00 sq. ft.

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
277	Small Commercial Office	191,980 sq. ft.	282,098 sq. ft.	282,098 sq. ft.	321,598 sq. ft.
	Government Office (CHP)	11,500 sq. ft.	11,500 sq. ft.	11,500 sq. ft.	11,500 sq. ft.
	Freestanding Retail	14,450 sq. ft.	18,050 sq. ft	18,050 sq. ft	18,050 sq. ft
282	Condominiums	798 D.U.	798 D.U.	798 D.U.	798 D.U.
	Health Club	—	16,000 sq. ft	16,000 sq. ft	16,000 sq. ft
322	Single-Family Residential	3,220 D.U.	3,220 D.U.	3,220 D.U.	3,220 D.U.
	Gov't Office (Fire Station)	77,091 sq. ft.	77,091 sq. ft.	77,091 sq. ft.	77,091 sq. ft.
	Large Industrial	542,455 sq. ft.	542,455 sq. ft.	542,455 sq. ft.	542,455 sq. ft.
	Elementary School	3,500 Students	3,500 Students	3,500 Students	3,500 Students
	Park	493 Acres	493 Acres	493 Acres	493 Acres
	Community Shopping Ctr.	163,372 sq. ft.	163,372 sq. ft.	163,372 sq. ft.	163,372 sq. ft.
380	Small Commercial Office	50,000 sq. ft.	50,000 sq. ft.	50,000 sq. ft.	50,000 sq. ft.
	Hotel/Motel	144 Rooms	274 Rooms	274 Rooms	280 Rooms
	Sit-down Restaurant	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.
381	Small Commercial Office*	24,000 sq. ft.	—	—	—
	Free Standing Retail	5,950 sq. ft.	5,950 sq. ft.	5,950 sq. ft.	5,950 sq. ft.
	Fast-Food Restaurant	1,575 sq. ft.	1,575 sq. ft.	1,575 sq. ft.	1,575 sq. ft.
	Apartments	1,219 D.U.	1,219 D.U.	1,219 D.U.	1,219 D.U.
	Condominiums*	1,000 D.U.	112 D.U.	112 D.U.	112 D.U.
	Single-Family Residential	1,038 D.U.	1,038 D.U.	1,038 D.U.	1,038 D.U.
	Service Station	14 Pumps	14 Pumps	14 Pumps	14 Pumps
	Church	4 Acres	4 Acres	4 Acres	4 Acres
	Elementary School	980 Students	980 Students	980 Students	980 Students
	High School	400 Students	400 Students	400 Students	400 Students
	Government Office	77,930 sq. ft	77,930 sq. ft	77,930 sq. ft	77,930 sq. ft
382	Large Regional Shop. Ctr.	1,427,427 sq. ft.	1,427,427 sq. ft.	1,427,427 sq. ft.	1,427,427 sq. ft.
383	Hotel/Motel	1,262 Rooms	1,262 Rooms	1,225 Rooms	1,225 Rooms
	Quality Restaurant	16,424 sq. ft.	21,624 sq. ft.	21,624 sq. ft.	21,624 sq. ft.
	Service Station	2 Pumps	2 Pumps	2 Pumps	2 Pumps
384	Large Commercial Office	277,665 sq. ft.	242,000 sq. ft.	242,000 sq. ft.	242,000 sq. ft.
	Small Commercial Office	125,472 sq. ft.	90,990 sq. ft.	90,990 sq. ft.	90,990 sq. ft.
385	Small Commercial Office	190,000 sq. ft.	174,162 sq. ft.	174,162 sq. ft.	174,162 sq. ft.
	Quality Restaurant	15,000 sq. ft.	14,200 sq. ft.	14,200 sq. ft.	14,200 sq. ft.
	Apartments	343 D.U.	343 D.U.	343 D.U.	343 D.U.
	Service Station	6 Pumps	6 Pumps	6 Pumps	6 Pumps
	Night Club	—	9,500 sq. ft.	9,500 sq. ft.	9,500 sq. ft.
386	Large Regional Shop. Ctr	1,460,000 sq. ft.	1,460,000 sq. ft.	1,460,000 sq. ft.	1,460,000 sq. ft.
387	Large Commercial Office	133,690 sq. ft.	133,690 sq. ft.	133,690 sq. ft.	133,690 sq. ft.
	Small Commercial Office	133,690 sq. ft.	—	—	—
	Hotel/Motel	300 Rooms	300 Rooms	290 Rooms	500 Rooms
	Sit-Down Restaurant	10,000 sq. ft.	10,000 sq. ft.	9,600 sq. ft.	11,000 sq. ft.

*All or part of these land uses have been transferred to new Zones 441 and 442 for all forecasts run after 1/1/82.

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
388	Large Commercial Office	200,450 sq. ft.	146,000 sq. ft.	146,000 sq. ft.	146,000 sq. ft.
	Small Commercial Office	200,450 sq. ft.	616,319 sq. ft.	616,319 sq. ft.	616,319 sq. ft.
	Quality Restaurant	12,275 sq. ft.	22,905 sq. ft.	22,905 sq. ft.	22,905 sq. ft.
	Single-Family Residential	6 D.U.	—	—	—
	Neighborhood Shopping Ctr.	50,000 sq. ft.	46,000 sq. ft.	46,000 sq. ft.	—
	Sit-down Restaurant	6,000 sq. ft.	—	—	—
389	Large Commercial Office	153,080 sq. ft.	614,160 sq. ft.	614,160 sq. ft.	614,160 sq. ft.
	Small Commercial Office	153,080 sq. ft.	—	—	—
	Hotel/Motel	300 Rooms	—	—	—
	Quality Restaurant	7,200 sq. ft.	—	—	—
	Drive-Up Bank Tellers	—	—	—	4 units
390	Condominiums	1,007 D.U.	1,007 D.U.	1,007 D.U.	1,007 D.U.
391	Small Commercial Office	86,124 sq. ft.	86,124 sq. ft.	86,124 sq. ft.	86,124 sq. ft.
	Freestanding retail	77,625 sq. ft.	77,625 sq. ft.	77,625 sq. ft.	77,625 sq. ft.
	Neighborhood Shopping Ctr.	3,200 sq. ft.	3,200 sq. ft.	3,200 sq. ft.	3,200 sq. ft.
	Large Industrial	193,443 sq. ft.	193,443 sq. ft.	193,443 sq. ft.	193,443 sq. ft.
	Sit-down Restaurant	5,908 sq. ft.	5,908 sq. ft.	5,908 sq. ft.	5,908 sq. ft.
	Fast-food Restaurant	2,332 sq. ft.	2,332 sq. ft.	2,332 sq. ft.	2,332 sq. ft.
	Condominiums	2 D.U.	2 D.U.	2 D.U.	2 D.U.
	Single-Family Residential	1 D.U.	1 D.U.	1 D.U.	1 D.U.
	Service Station	14 Pumps	14 Pumps	14 Pumps	14 Pumps
	Medical Office	12,850 sq. ft.	12,850 sq. ft.	12,850 sq. ft.	12,850 sq. ft.
	Car Dealer	14,200 sq. ft.	14,200 sq. ft.	14,200 sq. ft.	14,200 sq. ft.
392	Large Commercial Office	210,970 sq. ft.	210,970 sq. ft.	210,970 sq. ft.	210,970 sq. ft.
	Small Commercial Office	105,150 sq. ft.	105,150 sq. ft.	105,150 sq. ft.	105,150 sq. ft.
	Car Dealer	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.
	Freestanding Retail	55,488 sq. ft.	55,488 sq. ft.	55,488 sq. ft.	55,488 sq. ft.
	Large Industrial	309,586 sq. ft	309,586 sq. ft	309,586 sq. ft	309,586 sq. ft
	Sit-down Restaurant	567 sq. ft.	567 sq. ft.	567 sq. ft.	567 sq. ft.
	Fast-food Restaurant	5,076 sq. ft.	5,076 sq. ft.	5,076 sq. ft.	5,076 sq. ft.
	Condominiums	8 D.U.	8 D.U.	8 D.U.	8 D.U.
	Single-Family Residential	9 D.U.	9 D.U.	9 D.U.	9 D.U.
	Savings & Loan	6,400 sq. ft.	6,400 sq. ft.	6,400 sq. ft.	6,400 sq. ft.
	Service Station	18 Pumps	18 Pumps	18 Pumps	18 Pumps
393	Small Commercial Office	116,250 sq. ft.	116,250 sq. ft.	116,250 sq. ft.	116,250 sq. ft.
	Condominiums	145 D.U.	145 D.U.	145 D.U.	145 D.U.
	Church	1.03 Acres	1.03 Acres	1.03 Acres	1.03 Acres
	Convalescent Hospital	48 Beds	48 Beds	48 Beds	48 Beds
	4-Year College	5,400 Students	5,400 Students	5,400 Students	5,400 Students
394	Small Commercial Office	—	176,045 sq. ft.	76,045 sq. ft.	76,045 sq. ft.
	Large Commercial Office	264,827 sq. ft.	163,000 sq. ft.	163,000 sq. ft.	163,000 sq. ft.
395	Small Commercial Office	467,182 sq. ft.	127,225 sq. ft.	127,225 sq. ft.	127,225 sq. ft.
	Large Commercial Office	467,182 sq. ft.	807,139 sq. ft.	807,139 sq. ft.	807,139 sq. ft.

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
396	Small Commercial Office	98,000 sq. ft.	—	—	—
	Hotel/Motel	886 Rooms	650 Rooms	650 Rooms	650 Rooms
	Quality Restaurant	11,470 sq. ft.	11,470 sq. ft.	11,470 sq. ft.	11,470 sq. ft.
	Service Station	6 Pumps	6 Pumps	6 Pumps	6 Pumps
	Large Commercial Office	—	240,770 sq. ft.	240,770 sq. ft.	240,770 sq. ft.
397	Small Commercial Office	226,152 sq. ft.	452,304 sq. ft.	452,304 sq. ft.	452,304 sq. ft.
	Small Commercial Office	225,152 sq. ft.	—	—	—
398	Large Commercial Office	149,975 sq. ft.	299,950 sq. ft.	299,950 sq. ft.	299,950 sq. ft.
	Small Commercial Office	149,975 sq. ft.	—	—	—
399	Community Shopping Ctr.	181,728 sq. ft.	181,728 sq. ft.	181,728 sq. ft.	181,728 sq. ft.
400	Large Community Office	146,150 sq. ft.	108,626 sq. ft.	108,626 sq. ft.	108,626 sq. ft.
	Small Commercial Office	146,150 sq. ft.	235,100 sq. ft.	221,900 sq. ft.	221,900 sq. ft.
	Hotel/Motel	217 Rooms	217 Rooms	217 Rooms	217 Rooms
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps
	Theater	919 Seats	919 Seats	919 Seats	919 Seats
401	Hotel/Motel	449 Rooms	449 Rooms	449 Rooms	449 Rooms
	Health Club	62,500 sq. ft.	62,500 sq. ft.	62,500 sq. ft.	62,500 sq. ft.
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps
	Small Commercial Office	2,000 sq. ft.	2,000 sq. ft.	2,000 sq. ft.	2,000 sq. ft.
402	Small Commercial Office	12,738 sq. ft.	57,185 sq. ft.	57,185 sq. ft.	57,185 sq. ft.
	Condominiums	243 D.U.	243 D.U.	243 D.U.	243 D.U.
	Savings & Loan	21,375 sq. ft.	21,375 sq. ft.	21,375 sq. ft.	21,375 sq. ft.
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps
403	Newspaper Publisher	529,260 sq. ft.	529,260 sq. ft.	529,260 sq. ft.	529,260 sq. ft.
404	Small Commercial Office	77,640 sq. ft.	77,640 sq. ft.	77,640 sq. ft.	77,640 sq. ft.
405	Quality Restaurant	15,000 sq. ft.	15,000 sq. ft.	15,000 sq. ft.	15,000 sq. ft.
	Hotel/Motel	918 Rooms	918 rooms	918 rooms	918 rooms
	Small Commercial Office	62,000 sq. ft.	62,000 sq. ft.	62,000 sq. ft.	62,000 sq. ft.
	Parking Garage – Hospital	—	5,000 Trips/day	5,000 Trips/day	5,000 Trips/day
406	Health Club	5,000 sq. ft.	5,000 sq. ft.	5,000 sq. ft.	5,000 sq. ft.
	Condominiums (30 du/ac)	120 D.U.	120 D.U.	120 D.U.	120 D.U.
	Hotel/Motel	300 Rooms	300 Rooms	300 Rooms	300 Rooms
	Condominiums (30 du/ac)	—	—	—	—
407 (Opt. A)	Office Tower	400,000 sq. ft.	400,000 sq. ft.	400,000 sq. ft.	400,000 sq. ft.
407 (Opt. B)	Retail Center	192,000 sq. ft.	192,000 sq. ft.	192,000 sq. ft.	192,000 sq. ft.
408	Hotel	200 Rooms	400 Rooms	400 Rooms	400 Rooms
	Small Commercial Office	51,180 sq. ft.	84,085 sq. ft.	84,085 sq. ft.	84,085 sq. ft.
	Quality Restaurant	46,639 sq. ft.	30,354 sq. ft.	30,354 sq. ft.	30,354 sq. ft.
	Sit-down Restaurant	17,760 sq. ft.	47,226 sq. ft.	47,226 sq. ft.	47,226 sq. ft.
	Fast-food Restaurant	2,500 sq. ft.	—	—	—
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
409	Large Commercial Office	100,000 sq. ft.	100,000 sq. ft.	—	150,000 sq. ft.
	Small Commercial Office	85,721 sq. ft.	121,184 sq. ft.	214,984 sq. ft.	121,284 sq. ft.
	Freestanding Retail	7,200 sq. ft.	7,200 sq. ft.	7,200 sq. ft.	7,200 sq. ft.
	Service Station	4 Pumps	4 Pumps	4 Pumps	4 Pumps
	Savings and Loan	—	10,721 sq. ft.	10,721 sq. ft.	10,721 sq. ft.
410	Small Commercial Office	150,000 sq. ft.	—	—	—
	Large Commercial Office	—	138,000 sq. ft.	132,820 sq. ft.	250,000 sq. ft.
	Freestanding Retail	150,000 sq. ft.	150,000 sq. ft.	145,470 sq. ft.	29,400 sq. ft.
	Hotel/Motel	300 Rooms	300 Rooms	290 Rooms	300 Rooms
	Savings and Loan	—	12,000 sq. ft.	12,000 sq. ft.	12,000 sq. ft.
	Music Pavilion (Theater)	4,000 Seats	4,000 Seats	3,850 Seats	—
	Theater	2,000 Seats	2,000 Seats	1,925 Seats	—
	Large Regional Commercial	—	—	—	150,000 sq. ft.
411	Small Commercial Office	50,000 sq. ft.	50,000 sq. ft.	46,075 sq. ft.	—
	Neighborhood Shopping Ctr.	20,000 sq. ft.	20,000 sq. ft.	18,430 sq. ft.	—
	Apartments	300 D.U.	400 D.U.	400 D.U.	400 D.U.
	Condominiums	250 D.U.	250 D.U.	230 D.U.	220 D.U.
412	Large Commercial Office	140,000 sq. ft.	280,000 sq. ft.	280,000 sq. ft.	522,000 sq. ft.
	Small Commercial Office	140,000 sq. ft.	—	—	—
	Condominiums	—	—	—	370 D.U.
413	Large Commercial Office	140,000 sq. ft.	280,000 sq. ft.	280,000 sq. ft.	522,000 sq. ft.
	Small Commercial Office	140,000 sq. ft.	—	—	—
	Hotel/Motel	—	—	—	370 D.U.
414	Small Commercial Office	80,000 sq. ft.	80,000 sq. ft.	80,000 sq. ft.	—
	Condominiums	250 D.U.	250 D.U.	250 D.U.	300 D.U.
415	Large Commercial Office	—	100,000 sq. ft.	100,000 sq. ft.	100,000 sq. ft.
	Small Commercial Office	100,000 sq. ft.	—	—	—
	Freestanding Retail	4,000 sq. ft.	4,000 sq. ft.	4,000 sq. ft.	4,000 sq. ft.
	Savings & Loan	10,000 sq. ft.	10,000 sq. ft.	10,000 sq. ft.	10,000 sq. ft.
	Theater	825 Seats	825 Seats	825 Seats	825 Seats
	Service Station	6 Pumps	6 Pumps	6 Pumps	6 Pumps
416	Small Commercial Office	144,500 sq. ft.	159,955 sq. ft.	159,955 sq. ft.	159,955 sq. ft.
	Church	6.91 Acres	6.91 Acres	6.91 Acres	6.91 Acres
	Scottish Rite Temple (Convention Facility)	48,825 sq. ft.	48,825 sq. ft.	48,825 sq. ft.	48,825 sq. ft.
	Sit-down Restaurant	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.	6,000 sq. ft.
417	Freestanding Retail	127,600 sq. ft.	127,600 sq. ft.	117,575 sq. ft.	—
	Large Commercial Office	—	—	—	428,000 sq. ft.
418	Freestanding Retail	119,300 sq. ft.	119,300 sq. ft.	109,950 sq. ft.	—
	Research & Development	—	—	—	41,000 sq. ft.
	Small Commercial Office	—	—	—	99,400 sq. ft.

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as of 6/20/83
419	Large Commercial Office	232,080 sq. ft.	464,160 sq. ft.	464,160 sq. ft.	464,160 sq. ft.
	Small Commercial Office	232,080 sq. ft.	116,160 sq. ft.	116,160 sq. ft.	206,160 sq. ft.
	Theater	1,500 Seats	1,500 Seats	1,500 Seats	1,500 Seats
	Sit-down Restaurant	—	8,000 sq. ft.	8,000 sq. ft.	—
	Health Club	—	20,000 sq. ft.	20,000 sq. ft.	—
420	Condominiums	570 D.U.	570 D.U.	525 D.U.	525 D.U.
421	Neighborhood Shopping Ctr.	10,000 sq. ft.	10,000 sq. ft.	9,215 sq. ft.	9,215 sq. ft.
	Condominiums	290 D.U.	290 D.U.	265 D.U.	270 D.U.
	Small Commercial Office	58,080 sq. ft.	58,080 sq. ft.	53,520 sq. ft.	53,695 sq. ft.
422	Convalescent Hospital	123 Beds	123 Beds	123 Beds	123 Beds
	Elementary School	380 Students	380 Students	380 Students	380 Students
	Mission San Diego de Alcala	1	1	1	q
424	Large Commercial Office	—	170,000 sq. ft.	160,340 sq. ft.	160,340 sq. ft.
	Small Commercial Office	170,000 sq. ft.	—	—	—
	Small Reg. Shop. Ctr	306,000 sq. ft.	306,000 sq. ft.	288,620 sq. ft.	288,620 sq. ft.
	Hotel/Motel	786 Rooms	786 Rooms	786 Rooms	786 Rooms
425	Large Commercial Office	1,141,500 sq. ft.	1,660,000 sq. ft.	1,609,750 sq. ft.	1,609,750 sq. ft.
	Small Commercial Office	1,141,500 sq. ft.	—	—	—
	Mini Warehouses	—	69,010 sq. ft.	69,010 sq. ft.	69,010 sq. ft.
	Service Station	—	10 Pumps	10 Pumps	10 Pumps
	Small Industry	—	320,00 sq. ft.	320,000 sq. ft.	320,000 sq. ft.
	Small Ind./Bus. Park	—	150,000 sq. ft.	150,000 sq. ft.	150,000 sq. ft.
	Community Com'l. Shop. Str.	—	75,000 sq. ft.	75,000 sq. ft.	75,000 sq. ft.
	Sit-down Restaurant	—	8,800 sq. ft.	8,800 sq. ft.	8,800 sq. ft.
426	Large Commercial Office	250,000 sq. ft.	500,000 sq. ft.	470,890 sq. ft.	470,890 sq. ft.
	Small Commercial Office	250,000 sq. ft.	—	—	—
	Condominiums	4,688 D.U.	4,688 D.U.	4,415 D.U.	4,415 D.U.
427	Apartments	1,563 D.U.	1,563 D.U.	1,440 D.U.	1,445 D.U.
428	Large Commercial Office	110,700 sq. ft.	221, 400 sq. ft.	221,400 sq. ft.	221,400 sq. ft.
	Small Commercial Office	110,700 sq. ft.	—	—	—
429	Apartments	737 D.U.	—	—	—
	Condominiums	—	737 D.U.	737 D.U.	737 D.U.
430	Large Commercial Office	329,421 sq. ft.	181,300 sq. ft.	167,050 sq. ft.	167,050 sq. ft.
	Small Commercial Office	329,421 sq. ft.	—	—	—
431	Large Commercial Office	130,000 sq. ft.	147,000 sq. ft.	147,000 sq. ft.	147,000 sq. ft.
	Small Commercial Office	122,500 sq. ft.	124,500 sq. ft.	124,500 sq. ft.	124,500 sq. ft.
	Sit-down Restaurant	8,700 sq. ft.	8,700 sq. ft.	8,700 sq. ft.	8,700 sq. ft.
	Health Club	20,000 sq. ft.	22,360 sq. ft.	22,360 sq. ft.	22,360 sq. ft.
	Fast-food Restaurant	2,500 sq. ft.	2,313 sq. ft.	2,313 sq. ft.	2,313 sq. ft.
	Freestanding Retail	55,000 sq. ft.	55,000 sq. ft.	55,000 sq. ft.	55,000 sq. ft.
	Hotel/Motel	200 Rooms	200 Rooms	200 Rooms	200 Rooms

TABLE C
LAND USE CHANGES – JUNE 20, 1983* (cont.)

Zone	Land Use	INTENSITY			
		Previous Forecast 8/81	Corrected Totals and Small to Large Office Change	Totals (2/9/82) with Stadium Development	Updated Land Use as os 6/20/83
432	Small Commercial Office	78,440 sq. ft.	100,449 sq. ft.	100,449 sq. ft.	100,449 sq. ft.
	Quality Restaurant	14,600 sq. ft.	—	—	—
	Sit-down Restaurant	5,991 sq. ft.	5,991 sq. ft.	5,991 sq. ft.	5,991 sq. ft.
433	Small Commercial Office	180,000 sq. ft.	—	179,330 sq. ft.	455,000 sq. ft.
	Large Commercial Office	—	180,000 sq. ft.	149,440 sq. ft.	20,000 sq. ft.
	Freestanding Retail	150,000 sq. ft.	150,000 sq. ft.		
434	Freestanding Retail	105,000 sq. ft.	105,000 sq. ft.	96,760 sq. ft.	—
	Condominiums	300 D.U.	300 D.U.	275 D.U.	810 D.U.
	Large Commercial Office	—	—	—	180,000 sq. ft.
435	Large Commercial Office	110,000 sq. ft.	220,000 sq. ft.	220,000 sq. ft.	220,000 sq. ft.
	Small Commercial Office	110,000 sq. ft.	—	—	—
	Large Regional Commercial	—	—	—	150,000 sq. ft.
436	Condominiums	516 D.U.	516 D.U.	516 D.U.	516 D.U.
437	(With Stadium Dev.)				
	Small Commercial Office	233,046 sq. ft.	—	—	—
	Large Commercial Office	233,046 sq. ft.	326,264 sq. ft.	326,264 sq. ft.	326,264 sq. ft.
438	Small Commercial Office	25,973 sq. ft.	121,000 sq. ft.	121,000 sq. ft.	121,000 sq. ft.
	Large Commercial Office	93,027 sq. ft.	—	—	—
439	Small Commercial Office	50,740 sq. ft.	50,740 sq. ft.	50,740 sq. ft.	50,740 sq. ft.
	Neighborhood Shop. Ctr.	29,768 sq. ft.	29,768 sq. ft.	29,768 sq. ft.	29,768 sq. ft.
440	Large Commercial Office	105,000 sq. ft.	210,000 sq. ft.	210,000 sq. ft.	210,000 sq. ft.
	Small Commercial Office	105,000 sq. ft.	—	—	—
441*	Small Commercial Office	—	109,200 sq. ft.	109,200 sq. ft.	109,200 sq. ft.
442*	Condominiums	—	888 D.U.	888 D.U.	888 D.U.
	Neighborhood Shop. Ctr.	—	18,480 sq. ft.	18,480 sq. ft.	18,480 sq. ft.
443**	Small Commercial Office	359,588 sq. ft.	—	—	—
	Large Commercial Office	359,588 sq. ft.	215,752 sq. ft. ***	198,492 sq. ft.	198,492 sq. ft.
444**	Small Commercial Office	204,297 sq. ft.	—	—	—
	Large Commercial Office	204,297 sq. ft.	286,016 sq. ft. ***	263,135 sq. ft.	263,1—sq. ft.
445**	Condominiums	106 D.U.	74 D.U.	68 D.U.	68 D.U.

* These two zones are new and were originally part of Zone 381.

** These three zones were previously #441-443. They are added only when the proposed stadium development is included in a forecast.

*** These totals represent a change to all large commercial office and then a lowering of the land use to achieve a trip per acre rate equal to the surrounding land uses, approximately 400 trips/acre.

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Appendix D

APPENDIX D

DEPARTMENT OF WATER RESOURCES RECOMMENDATIONS FOR WATER CONSERVATION AND WATER RECLAMATION

To reduce water demand, the following water conservation measures should be implemented.

REQUIRED BY LAW:

1. Low flush toilets (see Section 17921.3 of the Health and Safety Code).
2. Low-flow showers and faucets (California Administrative Code, Title 24, Part 6, Article 1, T20-1406F).
3. Insulation of hot water recirculating systems (California Energy Commission regulations).

RECOMMENDATIONS TO BE IMPLEMENTED WHERE APPLICABLE:

Interior:

1. Supply line pressure: recommended water pressure greater than 50 pounds per square inch (psi) be reduced to 50 psi or less by means of a pressure-reducing valve.
2. Flush valve operated water closets: recommend 3 gallons per flush.
3. Drinking fountains: recommend equipped with self-closing valves.
4. Pipe insulation: recommend all hot water lines in dwelling be insulated to provide hot water faster with less water waste and to keep hot pipes from heating cold water pipes.
5. Hotel rooms: recommend posting conservative reminders in rooms and rest rooms. * Recommend thermostatically-controlled mixing valve for bath/shower.
6. Laundry facilities: recommend use of water-conserving models of washers.
7. Restaurants: recommend use of water-conserving models of dishwashers or retrofitting spray emitters.

"The Department of Water Resources or local water district may aid in developing these materials.

Exterior:

1. Landscaped with low water-consuming plants wherever feasible.
2. Minimize use of lawn by limiting it to lawn dependent uses, such as playing fields.

3. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.

4. Preserve and protect existing trees and shrubs. Established plants are often adapted to low water conditions and their use saves water needed to establish replacement vegetation.

5. Install efficient irrigation systems which minimize runoff and evaporation and maximize the water which will reach the plant roots. Drip irrigation, soil moisture sensors and automatic irrigation systems are a few methods of increasing irrigation efficiency.

6. Use pervious paving material whenever feasible to reduce surface water runoff and aid in ground water recharge.

7. Grading of slopes should minimize surface water runoff.

8. Investigate the feasibility of utilizing reclaimed wastewater, stored rainwater, or household grey water for irrigation.

9. Encourage cluster development which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.

10. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This would aid in ground water recharge.

11. Flood plains and aquifer recharge areas which are the best sites for ground water recharge should be preserved as open space.

Appendix E

APPENDIX E

DEPARTMENT OF WATER RESOURCES RECOMMENDATIONS FOR FLOOD DAMAGE PREVENTION

In flood-prone areas, flood damage prevention measures required to protect a proposed development should be based on the following guidelines:

1. All building structures should be protected against a 100-year flood.

   It is the State's policy to conserve water. Any potential loss to groundwater should be mitigated.

2. In those areas not covered by a Floor Insurance Rate Map or a Flood Boundary and Floodway Map, issued by the Federal Emergency Management Agency, the 100-year flood elevation and boundary should be shown on the Environmental Impact Report.

3. At least one route of ingress and egress to the development should be available during a 100-year flood.

4. The slope and foundation designs for all structures should be based on detailed soils and engineering studies, especially for all hillside developments.

5. Revegetation of the slopes should be done as soon as possible.

6. The potential damage to the proposed development by mudflow should be assessed and mitigated as required.

7. Grading should be limited to dry months to minimize problems associated with sediment transport during construction.

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Appendix F

APPENDIX F

ACCEPTABLE PLANT SPECIES FOR MISSION VALLEY

Riparian Deciduous Trees
Platanus racemosa
Populus fremontii

Slope Trees
Acacia baileyana
A. cyclopsis
Aesculus californica
Callistemon citrinus
Casuarina spp.
Ceratonia siliqua
Hetermoles arbutifolia
Lyonothamnus floribundus 'Asplenifolius'
Melaleuca styphelioides
Melia azedarach
Olea europaea
Pinus eldarica
Pinus halepensis
Prunus caroliniana
Prunus lyonii
Rhus lancea

Major Street Theme Trees
Eucalyptus (selected species)

Large Scale Canopy Trees
Catalpa speciosa
Eucaluptus (selected species)
Fraxinus velutina
Platanus racemosa

Evergreen Upright Street Trees
Brachychiton populneu
Callistemon viminalis
Cedrus deodara
Cedrus libani

Evergreen Upright Street Trees
Brachychiton populneus
Callistemon viminalis
Cedrus deodara
Cedrus libani

Evergreen Upright Street Trees (cont.)
Liriodendron tulipifera
Magnolia grandiflora
Prunus caroliniana
Tristania conferta

Colorful Deciduous Round Headed Trees
Aesculus californica
Albizia julibrissin
Bauhinia variegata
Brachychiton acerifolium
Calodendron capense
Chorisia speciosa
Jacaranda acutifolia
Koelreuteria paniculata
Lagerstroemia indica
Parkinsonia aculeta
Pistacia chinensis
Pyrus kawakamii
Tipuana tipu

Large Evergreen Round Headed Street Trees
Ceratonia siliqua
Cinnamomum camphora
Cupaniopsis anacardioides
Fiscus retusa
Quercus ilex
Tipuana tipu
Ulmus parviflora
Umbellularia californica

Small Evergreen Round Headed Street Trees
Arbutus menziesii
Callistemon citrinus
Eriobotyra japonica
Ficus rubiginosa
Geijera parviflora
Leptospermum laevigatum
Ligustrum lucidum
Maytenus boaria
Melaleuca linarifolia
Olea europaea

Small Evergreen Round Headed Street Trees (cont.)

Rhus lancea
Schinus terebinthifolius

Potential Shrubs

Abelia grandiflora
Agapanthus africanus
Agave americana
Aloe spp.
Artemesia spp.
Artriplex semibaccata
Baccaris piluaris ‘consanguinea’
Callistemon citrinus
Cassia spp.
Ceanothus (all species)
Cistus corbariensis
Cistus purpureus
Coleonema pulchrum
Cordyline australis
Correa pulchella
Cotoneaster glaucophylla
Dendromecon harfordii
Dendromecon rigida
Dodonaea viscosa
Echium fastuosum
Elaeagnus angustifolia
Elaeagnus multiflora
Elaegnus pungens
Eriogonum arborescens
Pyracantha species
Raphiolepis indica 'rosea'
Rhus ovata
Ribes speciosum
Ribes viburnifolium
Robinia hispida
Rosmarinus officinalis
Salvia greggii
Salvia leucantha
Salvia leucophylla
Senecio cineraria
Sophora spp.
Tamarix spp.
Teucrium fruticans
Trichostema lanatum

Potential Shrubs (cont.)

Viburnum spp.
Xylosma congestum
Yucca glauca
Eriogonum giganteum
Erythrina bidwillii
Feijoa sellowiana
Fremontodendron ‘California Glory’
Fremento mexicanum
Hakea laurina
Hakea sauveolens
Hebe spp.
Heteromeles arbutifolia
Juniperus spp.
Lantana spp.
Leptosperum laevigatum
Leucophyllum frutescens
Ligustrum spp.
Lonicera spp.
Mahonia aquifolium
Melaeuca spp.
Myrtus communis
Nandina domestica
Nerium oleander
Ochna serrulata
Myrsine africana
Phormium tenax
Phototinia fraseri
P. serrulata
Pittosporum tobira
Pittosporum phillyraeoides
Pittosporum crassifolium
Plumbago capensis (or P. auriculata)
Prunus Carolina
P. lusitanica
Punica granatum
Pyracantha species
Raphiolepsis indica 'rosea
Rhus ovata
Ribes speciosum
Ribes viburnifolium
Robinia hispida
Rosmarinus officinalis
Salvia greggii
Salvia leucantha

Potential Shrubs (cont.)

Salvia leucophylla
Senecio cineraria
Sophoro spp.
Tamarix spp.
Teucrium fruticans
Trichostema lanatum
Viburnum spp.
Xylosma congestum
Yucca glauca

Potential Vines

Bougainvillea
Campis spp.
Clematis armandii
Ficus pumila
Lonicera sempervirens
Solanum jasminoides
Tecomaria capensis
Vitus vinifera
Wisteria spp.

Potential Ground Covers

Achillea tomentosa
Ajuga reptans
Arctoslaphylos uva - ursi
Arctotheca calendula
Artriplex semibaccata
Baccaris pilularis
var. prostrata
Baccharis pilularis
cv. 'Twin Peaks'
Carrisa grandflora

Potential Ground Covers (cont.)

cv. 'Green Carpet'
Ceanothus prostratus
Cistus 'descaso Hybrid'
Delosperma 'Alba'
Drosanthemum floubundum
Fragaria chiloensis
Gazania uniflorao
Hedera canariensis
Hypericum calycinum
Lampranthus aurantiacus
Lampranthus filicaulis
Lampranthus soectabilis
Lantana montevidensis
Lippia canescens
Lonicera japonica
cv. 'Halliana'
Malephora crocea
Myoporum parvifolium
Parthenocissus tricuspidata
Pelargonium peltatum
Potentilla verna
Rosmarinus officinalis
var. prostratus
Salvia sonomeusis
Santolina chamaecyparissus
Sedum confusum
Senecio serpens
Teucrium chamaedrys
Thymus serpyllum
Verbena peruviana
Vinca major
Vinca minor

Note: See ~~**Appendix G**~~ San Diego River Park Master Plan for acceptable species for Wetland areas

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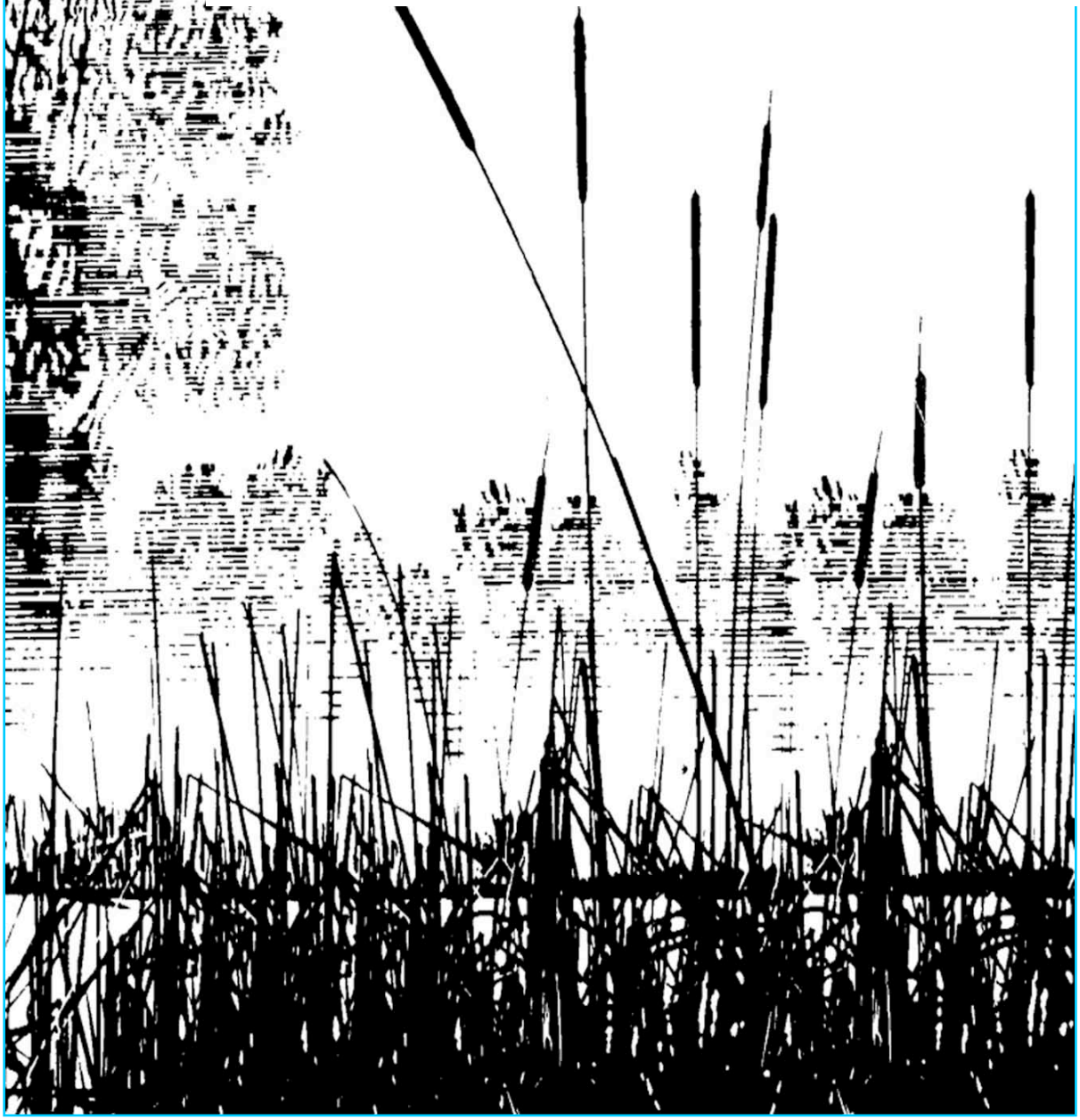
~~San Diego River Wetlands Management Plan~~

~~AN ELEMENT OF THE MISSION VALLEY COMMUNITY PLAN~~



~~*Appendix G*~~

APPENDIX G

SAN DIEGO RIVER WETLANDS MANAGEMENT PLAN

Prepared by the Environmental Quality Division of the City of San Diego Planning Department.

ACKNOWLEDGEMENTS

This plan was conceived and developed with the assistance of Jack Fancher, U.S. Fish and Wildlife Service; Mike Mulligan and Harold McKinnie, California Department of Fish and Game; and John Rieger and Mark Moore, Caltrans. Technical assistance was also provided by Dr. Bertin Anderson, Colorado River Research Laboratory; and Harold Wier, Biological Consultant.

SUMMARY

This report serves as management plan for a portion of the San Diego River from I-5 on the west to Friars Road on the east. The Wetlands Management Plan was undertaken to clarify expectations regarding the protection of wetlands associated with the San Diego River in Mission Valley and to facilitate the granting of federal, state and local permits for projects in this area. The wetlands plan is based on the premise that modification of the floodway can and should achieve wetlands protection and restoration by incorporating mutually supportive hydraulic and biologic parameters into land development and design of a flood control channel. The intent is that no net reduction of wetlands habitat will be allowed with the buildout of Mission Valley and that the overall quality of existing habitats will be improved. Biological design criteria and development guidelines described in the plan provide the framework for accomplishing this goal. The plan addresses the techniques for managing individual sections of the river and describes the process for the submittal of land use proposals in the study area.

INTRODUCTION

Purpose

The primary purpose of this plan is to define a means of maintaining and improving the overall quality of the wetlands associated with the San Diego River while allowing for development in Mission Valley. The intent of the plan is to establish a framework for accomplishing this goal by incorporating biological considerations into planning for development and flood management of the river.

By developing a comprehensive plan which specifies the future character of the river corridor, those agencies charged with protection of wildlife resources can avoid the increasing difficulty in justifying approval of individual permit applications. Under the present system, incremental losses of wetlands habitats are occurring. Piecemeal compensation projects cannot assure that a unified and functional wetland habitat will

remain. With the Wetlands Management Plan, a comprehensive approach to wetlands protection can be applied, development expectations can be clarified, and the granting of permits for projects which are in conformance with the plan can be facilitated.

OBJECTIVES

The objectives of the Wetlands Management Plan are:

- To establish a systematic and comprehensive guide for preserving, improving and reconstructing a continuous and functional natural wetlands corridor along the San Diego River in Mission Valley.

- To clarify a set of common goals and intentions among various governmental agencies and private interests which will allow the orderly completion of appropriate floodplain development, including necessary transportation links and flood protection features.

- To facilitate and expedite processing of the U.S. Army Corps of Engineers 404 Permit and California Department of Fish and Game 1601/1603 Agreement for projects which involve alteration of wetlands and the streambed of the Mission Valley portion of the San Diego River.

BACKGROUND

Location and Setting

The San Diego River is one of six major rivers in San Diego County. As indicated in **Figure 1**, it originates in the Cuyamaca mountains and flows to the southwest and west through the mountains and foothills of the County; then flows to the west, through Mission Valley in the central portion of the City of San Diego before it enters into the Pacific Ocean. The wetlands plan study area encompasses a 5.9-mile reach of the San Diego River, bounded by Friars Road on the east and I-5 on the west. The existing floodway (FW) zone in Mission Valley defines most of the north/south extent of the study area. Existing wetlands and areas not presently developed which are outside of the FW zone boundaries are also included in the study area.

Most of the wetlands plan study area is included in the Mission Valley community planning area. The Mission Valley plan area extends the length of the study area but covers only the western bank from about the point where the river bends northward. The river channel and land adjacent to the northeastern bank is included in the Navajo Community Plan.

Baseline Information

A field survey of the habitats in the study area was conducted by California Department of Transportation (Caltrans) biologists. As part of the survey, vegetation was classified and mapped according to habitat types. All vegetation within and adjacent to the floodway was mapped. Non-wetland areas which would be suitable for conversion to wetlands were

identified. This baseline information formed the foundation for the Wetlands Management Plan. This information was used to establish the limits and characteristics of the existing conditions and identify potential areas for habitat conversion and improvement. It should be noted that the mapping was done on a generalized basis and is not meant to be site-specific. At the project level, a more detailed vegetative map must be prepared based on a biological survey of the project site.

Existing Habitats

The Mission Valley portion of the San Diego River supports three major wetlands-associated plant communities as described herein. These include: 1) open water (pond aquatic), 2) freshwater marsh, and 3) riparian woodland. A fourth wetlands type, transitional wetlands, is also described.

Pond Aquatic

Pond aquatic habitats are found in slow moving portions of the river or ponded areas. Within the planning area, species found in this habitat include water fern, duckweed, water hyacinth, water plantain and ditchgrass.

Freshwater Marsh

Freshwater marsh is an aquatic community of immersed plants found where the water table is at or just above the surface on the shallow margins of open water habitats. In Mission Valley, it is composed primarily of cattails and bulrush. This habitat is disturbed periodically by flooding, but is located east of Stadium Way and immediately west of Mission Center Road.

Riparian Woodland

Riparian woodland is generally linear in character and closely follows the margins of permanent rivers, streams and spring-like areas. This woodland is composed of semi-aquatic trees and herbs which are often dense enough to resemble a forest. Within the study area, the riparian canopy consists primarily of willows, with a small number of cottonwoods and sycamores. Riparian woodlands associated with this portion of the San Diego River vary in width to 400 feet.

Transitional Wetlands

Also present within the study area are vegetative associations typical of floodplains. Floodplain habitats are periodically disturbed due to flooding, and support species which readily occupy disturbed drainage areas. Within the study area, willows are scattered in these areas in addition to a variety of native shrubs and native and nonnative (weedy) herbs. This habitat may be considered transitional between the riparian and marsh habitats and the surrounding uplands.

The term "wetlands" as used in this plan refers to any of the habitat types described above.

~~Uplands~~

~~The remainder of the vegetation in the study area is considered upland habitat. Uplands are distinguished from wetlands by the absence of saturated soils. Shrub-type vegetation such as broom baccharis dominate the uplands within the study area. Weedy annuals are also present. Vegetation of this type typically invades areas recovering from past disturbance and is successional to the coastal sage scrub and chaparral communities which occupy more natural uplands.~~

~~Resource Value~~

~~Due to their ability to support a diversity of wildlife species, wetlands are a valuable resource. Proximity to water, interface between a variety of habitat types, and vertical stratification of foliage are factors which contribute to the richness and productivity of wetlands. While a few wildlife species are restricted entirely to wetlands for all their life requirements, many more are dependent on these habitats for critical life functions such as food, cover or breeding. Numerous other species also make extensive use of these habitats even though they are not dependent upon them. Many wetlands-dependent species are declining in population due to the destruction of these habitats by agricultural and urban development.~~

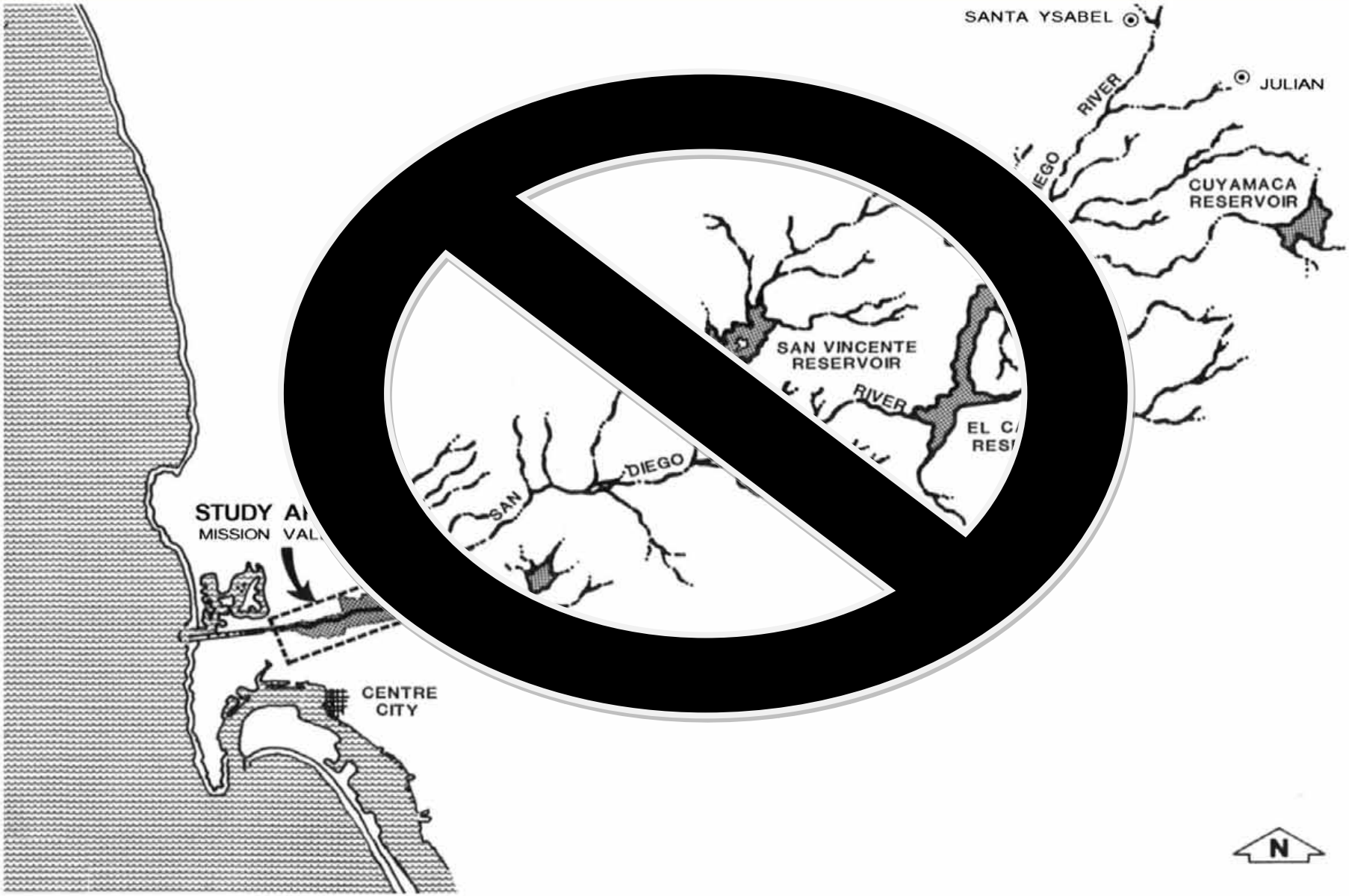
~~A brief description of the resources of the San Diego River is included in **Appendix A**.~~

~~Floodplain Regulation~~

~~Existing flood management in Mission Valley consists of regulatory zoning (Floodway, FW; and Floodplain Fringe, FPF). These zones were based on the U.S. Army Corps of Engineers determination in 1973 that the 100-year flood would have a peak discharge of 36,000 cubic feet per second (cfs). This zoning was applied in 1977 after much of the existing development had occurred and was intended to serve as an interim measure until a permanent flood-control channel could be developed. The FW zone defines the area which convey a 100-year frequency flood without increasing the water surface more than one foot above the water surface of a 100-year frequency flood without increasing the water surface more than one foot above the water surface of a 100-year frequency flood unconfined within the floodplain.~~

~~The purpose of the FW zone is to regulate and control development in the delineated floodways of floodplains. These regulations are intended to protect the public health, safety, and general welfare. Uses permitted in the FW zone are those which will not impede the flow of floodways. Permanent structures are not permitted in the FW zone, however, uses such as parking lots, parks, golf courses and agriculture are permitted.~~

~~The FPF is an overlay zone intended to regulate development in that portion of the floodplain lying between the floodway (FM zone) and the outermost boundary of the floodplain. This zone permits all uses allowed in the underlying zone subject to the review and approval by the City Manager.~~



San Diego River Drainage Basin

Mission Valley Community Plan

1 FIGURE

Insofar as the FW and FPF zones regulate the types of land use appropriate within the floodplain and require project review, they provide protection, albeit minimal, of wetlands. Presently, there is no citywide floodplain management policy which establishes environmental goals for floodplains.

In 1975, the Corps revised their peak discharge estimate to 49,000 cfs to coincide with the year 2000, 100-year flood level. Any future flood-control channel in Mission Valley will have to carry the 49,000 cfs volume. When a channel is designed which meets all hydraulic, environmental and design criteria to the satisfaction of the City Council, then the limits of the FW zone may be decreased, potentially increasing the area of developable land.

Statement of the Problem

Planning in Mission Valley must take into account a variety of land use interests with differing needs and objectives. Among these are:

Development Opportunities

Due to its central location in the City, there is strong pressure for continued urban development in Mission Valley. Development trends are towards high-intensity land uses, such as mixed-use development, offices, and visitor-oriented and retail commercial. To recover developable land and control flooding, there is a demand to confine the existing FW zone by means of channelization (lowering the river bottom with dredging and/or elevating the banks with fill).

Flood Protection

Since much of the existing development in Mission Valley occurred prior to floodway zoning, buildings and roadways are subject to frequent inundations. Some of this development was originally approved in the expectation that a major flood-control channel would be built along the length of Mission Valley.

The U.S. Army Corps of Engineers studied the possibility of constructing a concrete channel for the San Diego River. In 1976, the Corps reported to the City Council that a federally-sponsored project was not feasible due to the low benefit/cost ratio. The recommended alternative was a floodplain management program.

As a part of that program, the City Council in 1977 applied FW and FPF zoning to Mission Valley. An additional element of the floodplain management program at that time was development and implementation of a pilot channel system for maintenance of the entire floodway. This pilot channel program required funding through an assessment district formed on the basis of benefiting property owners and was never implemented due to lack of support from the property.

In the absence of a comprehensive channel, smaller pilot channels were created in three particularly flood-prone areas including: 1) the vicinity of the Stardust Country Club to Napa

Street; 2) the vicinity of Fashion Valley; and 3) the vicinity of the Stadium. Pilot channel construction involved clearing and grubbing of brush and trees and channel excavation. These pilot channels were intended to reduce flooding problems in the immediate area but not to handle high magnitude floods. A permanent, comprehensively planned flood facility is still sought in Mission Valley.

Environmental Protection

In recognition of the valuable functions of the wetlands and floodplains, a variety of federal and state directives mandate the protection and management of these resources. Of primary concern at the federal level is the Clean Water Act which defines the national programs for hydrologic modification of waters in the United States. Section 404 of the Act provides a specific mechanism for regulating the discharge of dredge and fill materials and authorizes the Corps of Engineers, in conjunction with the Environmental Protection Agency to regulate, through a permit program, these activities. A number of other federal directives also relate to the physical management of floodplains. A list of these directives, along with those of the Clean Water Act, and a brief description of their goals, is contained in **Appendix B**.

At the state level, protection of wetlands is provided by State of California Fish and Game Code Sections 1601-1603, which requires an agreement for proposed river or streambed alterations that may affect fish and wildlife resources. This agreement between the Department of Fish and Game and the party proposing streambed alterations contains measures to protect fish and wildlife resources. Wetlands in the coastal zone are also protected by the California Coastal Act.

In accordance with these federal and state directives, the U.S. Army Corps of Engineers and California Department of Fish and Game exercise permit and agreement authority over projects which involve dredging, filling, or alteration of the San Diego River. These agencies, along with the U.S. Fish and Wildlife Service, are charged with the protection of wetlands in carrying out the state and federal regulations described above.

In the past, mitigation for the loss of some wetlands in Mission Valley was handled on a case-by-case basis. This piecemeal approach to mitigation did not provide the assurance that the overall river system would be protected. Therefore, the federal and state agencies found it increasingly difficult to grant approvals to projects which impact wetlands and advocated a comprehensive planning approach to the situation.

Public Recreation

The San Diego River corridor is an asset to the community as it provides significant aesthetic, educational and recreational opportunities. With the proper implementation of public amenities, the river corridor has the potential to become an improved attraction for residents and tourists.

In the past, these land use interests have been regarded as conflicting uses. It is the intent of this plan to show how these interests can be complementary. Various features of this plan address the manner in which wetlands resource management can be integrated with development, flood protection, and recreation to create a river corridor which serves multiple purposes.

Definitions

The following definitions apply to the terms as used in this document:

Buffer

A buffer is "a designated land or water area along the perimeter of some land use whose own land use is regulated so as to resist, absorb, or otherwise preclude unwanted development or other intrusions into areas beyond the buffer" (U.S.D.A. Forest Service, 1976). In the context of this plan, a buffer is a separation or screening between urban development and the wetlands habitat. The purpose of this buffer is to minimize human and domestic animal encroachment into the wetlands area and to protect wildlife habitat from excessive human disturbance caused by noise, visual or direct disruption associated with development.

Compensation/Mitigation

Compensation is a form of mitigation taken to offset the loss or disruption of floodway habitat. As used in this plan, compensation can take the form of wetlands conversion or improvement (defined below) to fully restore or rehabilitate degraded habitats and improve the overall quality of wetlands associated with the river. This concept is partially based on the U.S. Fish and Wildlife Service Mitigation Policy which is included as **Appendix C**.

Conservation

The graphics indicate areas where wetlands should be conserved. In areas designated for conservation, no reduction of wetlands should occur. These areas are not available as mitigation sites since they contain relatively high-quality wetlands. In general, any loss of riparian woodland should be avoided. The only improvement which should be permitted in these areas is a flood-control channel. A flood-control channel must take provisions for incorporating at least an equal amount of wetlands habitat (by habitat type) into channel design.

Conversion

Refers to the alteration of habitat from uplands to wetlands. This process would involve excavation of suitable non-wetland floodplain land to a level where open water persists or wetland vegetation will thrive and landscaping with appropriate native herbaceous and woody wetland plants.

Improvement

A method of increasing the wildlife value of wetlands that have been degraded by grading, paving, or clearing of native vegetation. Habitat improvement may require excavation and will necessitate landscaping with plants which add to the food and cover value of the wetlands.

River Channel/River Corridor

This includes the area within a flood-control channel, associated wetland habitat areas, and a buffer between the habitat and urban development. As required by the Mission Valley Community Plan, a flood-control facility or channel must be unlined and soft-bottomed with sloping vegetated sides.

Wetlands

In general terms, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil or on its surface. The single feature that most wetlands share is soil or substrate that is at least periodically saturated with or covered by water. Wetlands are defined by plants (hydrophytes), soils (hydric soils) and frequency of flooding (Cowardin et al, 1979).

CONSTRAINTS AND OPPORTUNITIES

While the biological value of some of the San Diego River is degraded due to its location in the center of an urbanized area and a history of past disturbances, it nevertheless offers an opportunity to combine community planning with the protection of significant biological resources. The Wetlands Management Plan takes into account the following constraints:

- The extent of past disturbance and confinement of the river precludes the possibility of recreating a truly natural floodway.
- The primary purpose of this Wetlands Management Plan is to protect, preserve and enhance wetlands in the San Diego River. However, since the floodway is within an urban setting and must serve multiple purposes, it cannot serve solely as wildlife habitat.
- Further development will occur within the floodway, restricting the extent of wetlands in some areas.
- Wetlands protection precludes the development of certain types of flood-control channel design (i.e., concrete) and flood-control regimes (unmitigated brushing and clearing of vegetation).
- Wetlands vegetation may create hydrologic problems (flooding) unless it is planned as part of a flood-control system.

Opportunities for enhancing wetlands and creating a valuable community resource are demonstrated by the following:

- Planning for a permanent flood-control system in most of Mission Valley is in the initial stages, therefore floodway habitat protection can be incorporated into flood channel design.
- Comprehensive planning can provide for a continuity of habitat and flood protection measures.

- Areas of degraded habitat exist which can be restored to achieve an overall improvement of the river system. Habitat improvement or conversion can be used as mitigation for any future losses.

- Most wetland habitats are relatively resilient and can become reestablished quickly.

- Increased aesthetics will generally follow habitat quality improvement.

PRINCIPLES AND POLICIES

The following principle governs the operation of this Wetlands Management Plan and establishes the requirements for mitigation:

> **The established FW zone boundary encompasses a sensitive resource area wherein no modifications (grading, paving, removal of vegetation) shall be permitted unless mitigation is accomplished in agreement with this plan.**

Comprehensive planning for the river requires mitigation for any loss of existing floodway (wetlands or non-wetlands). While non-wetlands do not share the same habitat value as wetlands, they are nevertheless important to the management effort because they have potential for conversion to wetlands and can be used as compensation for the loss of wetlands in other areas.

This principle shall be carried out according to the following policies and mitigation criteria of this plan:

- Any channelization of the floodway shall plan for biological as well as hydraulic features. A continuous band of wetlands along both sides of the river shall be incorporated into channel design.

- Overall, there shall be no quantitative reduction in wetlands (as defined by vegetation) within the study area. Loss of wetlands can be permitted if it is mitigated in a manner which contributes to the overall qualitative improvement of the river corridor.

- Mitigation shall be appropriate for the quantity and type of vegetation lost and shall consist of habitat conversion or improvement of degraded wetlands. If the impact is to wetlands, there shall be an in-kind replacement or total wetlands and individual habitat types (unless it is demonstrated that the habitat would be improved through alternative replacement). If the impact is to non-wetlands in the FW zone, there shall be out-of-kind compensation through conversion to wetlands.

- Mitigation shall be accomplished concurrent with or in advance of floodway loss.

- The first priority is for a wetlands mitigation to occur within the same segment of the river in which the impact has occurred. Where it can be demonstrated that mitigation is not possible within the same segment, mitigation shall be permitted elsewhere within the study area.

LAND USE PROPOSALS AFFECTING WETLANDS

The Mission Valley and Navajo community plans include land use proposals in the vicinity of the river which may affect wetlands. Since these projects were accounted for in developing the Wetlands Management Plan, they would be considered consistent with the plan as long as development follows the policies, guidelines and criteria outlined in this plan. These land use proposals are identified below and discussed further in the Section Analysis of this report. Land use proposals which have not been anticipated could be acceptable, but they would require individual review to determine their consistency with the Wetlands Management Plan and effect on the river.

Road Improvements

Planned roadway improvements which would affect wetlands include the construction of:

- Camino de la Reina between Napa Street and SR-163 (see **Figures 4**, **6**, **8**, and **10**);
- Colusa Street river crossing (see **Figure 6**);
- Via las Cumbras river crossing (see **Figure 6**);
- Milly Way river crossing (see **Figure 18**);
- Camino del Rio North between Fairmount Avenue and I-15 (see **Figure 22**);
- Rancho Mission Road river crossing (see **Figure 22**);
- Widening of San Diego Mission Road across the river (see **Figures 22** and **24**); and
- Widening of the Friars Road bridge over San Diego River (see **Figure 24**).

Additionally, as required by the draft Mission Valley Community Plan, all north-south roads crossing the flood-control channel shall be constructed or improved to be passable during a minimum year 2000, ten-year flood (4,600 cfs). This will require improvement to existing roads as follows:

- Fashion Valley Road (see **Figure 10**);
- San Diego Mission Road (see **Figures 22** and **24**).

It has not been determined at this time precisely who will be responsible for these improvements. However, compensation for wetland impacts will be tied to the responsibility for road construction.

Construction and wetlands compensation for Camino del Rio North between Fairmount Avenue and I-15, the crossing of Rancho Mission Road, the segment of Camino de la Reina west of Colusa Street, and the widening of the Friars Road bridge would likely be the responsibility of the City. To the extent feasible, compensation for these projects will be provided on site or within the same segment of the river. Where it is not possible to compensate on site, wetlands will be improved or created on City-owned properties in western Mission Valley or near the Stadium.

The other improvements will likely be the responsibility of the developer and/or benefiting property owners, depending on arrangements to be made pending permit review. Compensation for the loss of wetlands resulting from construction of Colusa Street, via las Cumbres, Camino de la Reina east of Colusa Street and Milly Way should entail creation of wetland habitats or improvement of degraded wetlands within or adjacent to the floodway in the same section of the river as the project itself. Every attempt should be made to mitigate for the loss of wetlands due to construction of the major street in the vicinity of Fashion Valley within the same section. A mitigation site elsewhere in the study area should be approved only if it is demonstrated that there is no land available for complete or partial compensation.

CITY PROJECTS

Two major projects on City-owned properties include:

- Aquatic treatment facility. This project site is on 12.5 acres of Water Utilities Department property outside the floodway on the south side of the river between Milly Way and Murphy Canyon Road (see **Figures 17** and **19**). This is a three-year pilot project undertaken to determine design standards for future reclamation facilities. The three-phase project is expected to begin operation in late 1983, and to be completed in 1986. Use of the site beyond that date has not been determined. The site presently supports uplands vegetation, so wetlands would not be directly impacted. This, however, is a potential mitigation site for conversion to wetlands.

- Development of Stadium properties. An economic feasibility study is being conducted by the City of San Diego Property Department to determine how the Stadium, as well as other properties located between Stadium Way and I-15, might be developed or redeveloped in the future. The City will be responsible for mitigating any impacts to wetlands resulting from the Stadium project. Compensation should occur within the same river segment.

A capital improvement project, Alvarado Pipeline No. 2 - Phase II, involves the installation of a water pipeline in the proposed Rancho Mission Road and Camino del Rio North alignment. If the pipeline is installed in the road alignment, no mitigation in addition to that required for the road will be needed. If conditions do not allow the pipeline to be placed within the road, then mitigation will be required.

PRIVATE DEVELOPMENT PROPOSALS

Within the Wetlands Management Plan area, large undeveloped parcels anticipated for major private development are described below and shown on **Figures 1-6** as indicated.

1. The area west of Fashion Valley Road, designated as a Specific Planning Area (Assessor's Parcel Numbers 438-52-6, 7; 436-61-9, 13, 14, 15, 50; 437-24-3, 5, 11). See **Figures 6** and **8**.

2. The area on the south side of the river, just east of Stadium Way, designated for office use (Assessor's Parcel Numbers 438-52-6, 7). See **Figure 16**.

3. The area on the north side of the river, just east of Stadium Way, designated as a Specific Planning Area (Assessor's Parcel Numbers 433-10-6, 30; 433-23-33). See **Figure 18**.

4. The area on the northeast side of the river between San Diego Mission Road and Friars Road, designated for industrial use (Assessor's Parcel Numbers 461-15-10, 11, 12, 13 and 458-30-3, 4, 13). See **Figure 24**.

For these projects, compliance with the Wetlands Management Plan and mitigation of impacts to wetlands will be the responsibility of the developer. Compensation for the elimination of wetlands resulting from development (including any necessary roads) should be provided on site or within the same section of the river. Development proposals for areas outside the floodway should incorporate the criteria for development adjacent to the floodway described in this report.

PILOT CHANNELS

In the past, 50- to 95-foot-wide pilot channels have been constructed in critical areas of the river, namely: 1) the area from the Starburst Country Club to Napa Street; 2) Fashion Valley Road to SR-163; and 3) south of the Stadium. Previous permits and agreements did not provide for maintenance of these channels. In the absence of a permanent flood-control channel, it may be necessary to reconstruct previously created pilot channels or to construct new ones.

Pilot channel construction of this nature is subject to the requirements of this plan and any elimination of wetlands vegetation shall be mitigated. Once this loss of vegetation has been compensated for, periodic maintenance and clearing within an established pilot channel shall be permitted without a requirement for further mitigation.

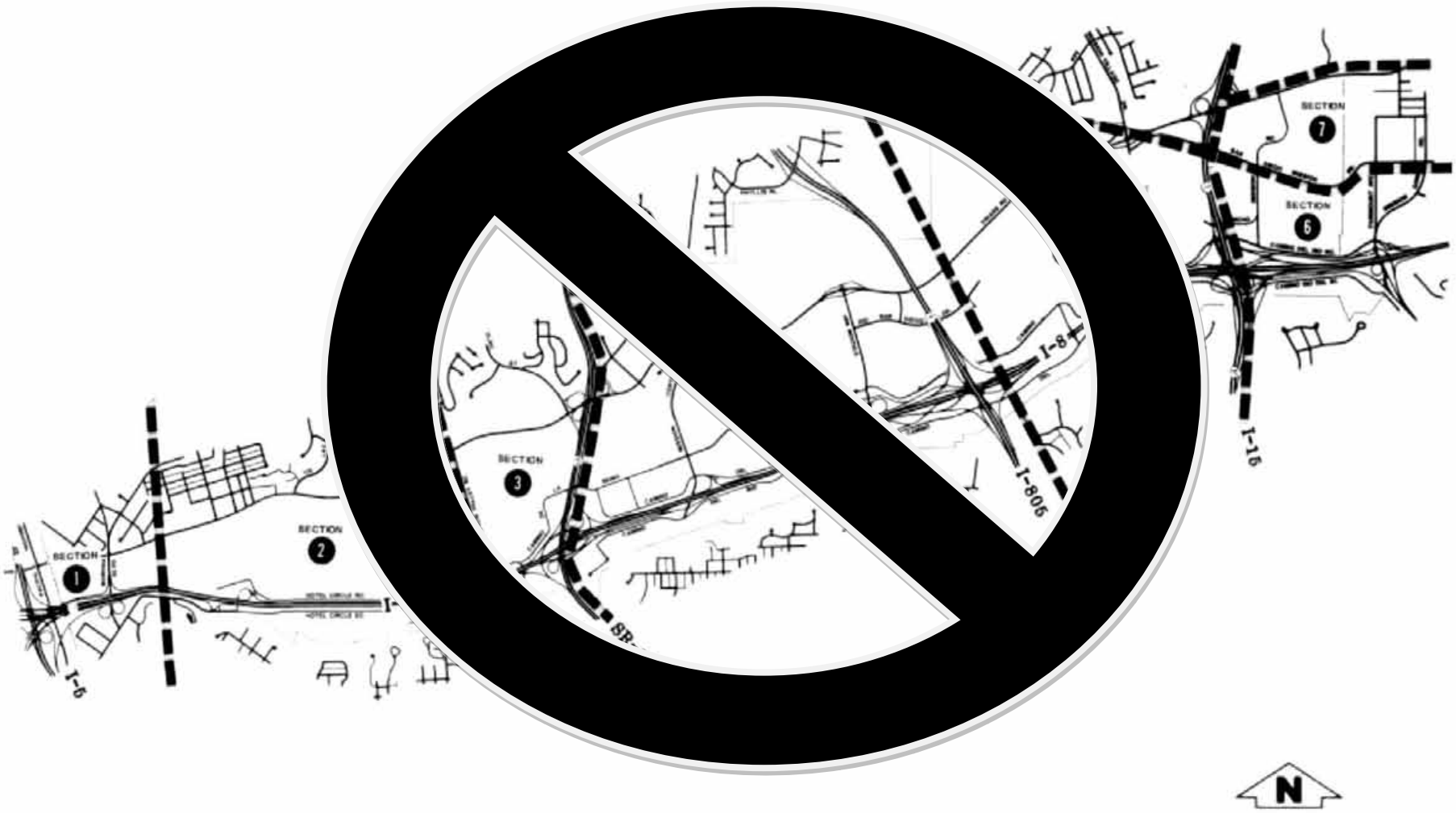
SECTION ANALYSIS

For planning purposes, the river was divided into seven sections (see **Figure 2**). The following is a discussion of how each section should be treated to accommodate the land use proposals discussed in the previous chapter and achieve the objectives of this plan. The section analysis provides a description of existing habitat and development along each section of the river. Opportunities for qualitative improvement of existing habitats are identified.

Existing and projected wetlands (shown on **Figures 3-24**) have been quantified for each section and the overall study area. The acreages for each section are shown on the following pages and the overall acreage is shown in **Table 1**.

TABLE 1
SUMMARY OF WETLANDS ACREAGE

Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion
Section 1	40	20	44
Section 2	21	55	87
Section 3	6	1	14
Section 4 (excluding FSDRIP)	20	7	4
Section 5	64	27	27
Section 6	30	3	4
Section 7	24	2	6
Totals	**205**	**115**	**186**



Key to Study Area Sections

Mission Valley Community Plan

2 FIGURE

SECTION 1 – INTERSTATE 5 TO 300 FEET WEST OF HARNEY ROAD

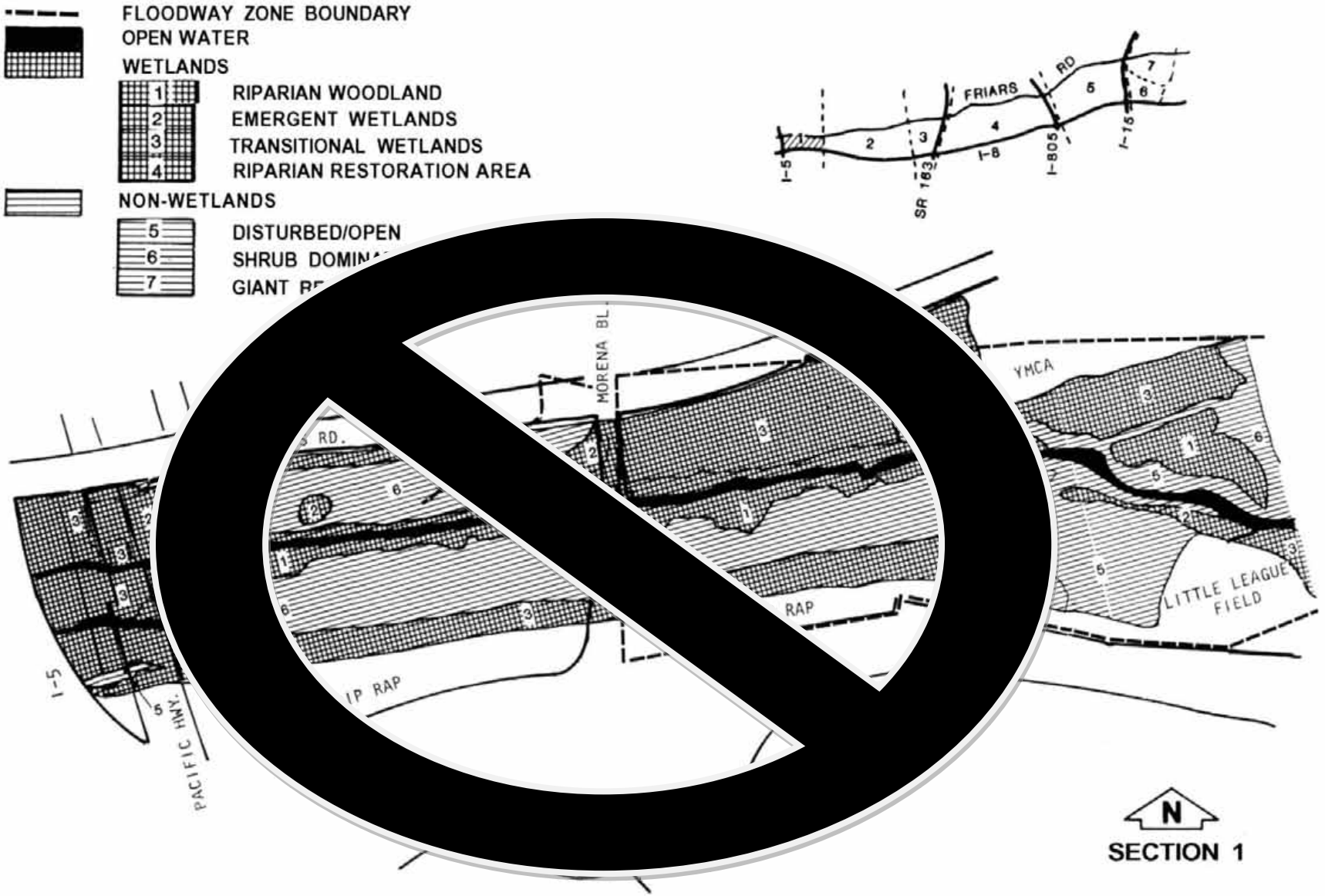
Wetlands occupy the majority of the area within the floodway zone boundaries. The low-flow river channel is quite narrow in this area and is a bordered by a narrow band of mature willow trees on both sides. Stands of willows also occur in other areas. Upland and transitional wetland vegetation occurs along the northern and southern extent of the floodway. Development within the floodway includes the YMCA (with parking lot) and Little League ball fields in the northeast and southeastern portions respectively, and a short segment of Friars Road in the northwest. All of the property in this section is in City ownership.

No further reduction of existing habitat other than the planned extension of Camino de la Reina to Friars Road should occur here. Many opportunities exist for improving the quality of wetland habitats. These include 1) the conversion of uplands to wetlands, and 2) improvement of degraded wetland habitats by increasing the quantity and quality of freshwater marsh and riparian woodland, and the amount of open water area. Areas of relatively high-quality wetlands, including the open water channel and woodlands shall not be used for mitigation sites. These areas are designated as conservation areas on **Figure 4**. A compensation site for the loss of wetlands associated with the Camino del Rio North project is also designated as a conservation area. Habitat development and improvement will be accomplished as mitigation for projects which impact wetlands in this and other sections of the plan area. Since this area is in City ownership, it is expected to be used primarily to compensate for City projects.

A pilot channel was created through the eastern portion of this section (south of the YMCA) and the western portion of Section 2 (Stardust Country Club). Any future clearing of vegetation will require mitigation.

TABLE 2
WETLANDS ACREAGE IN SECTION 1

Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	40	2	44	18
Open Water	3			
Freshwater Marsh	3			
Riparian Woodland	12			
Transitional Wetlands	22			
Non-Wetlands	24			



Existing Habitats—Generalized

Mission Valley Community Plan

3 FIGURE

Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

4 FIGURE

SECTION 2 – 300 FEET WEST OF HARNEY ROAD TO FASHION VALLEY ROAD

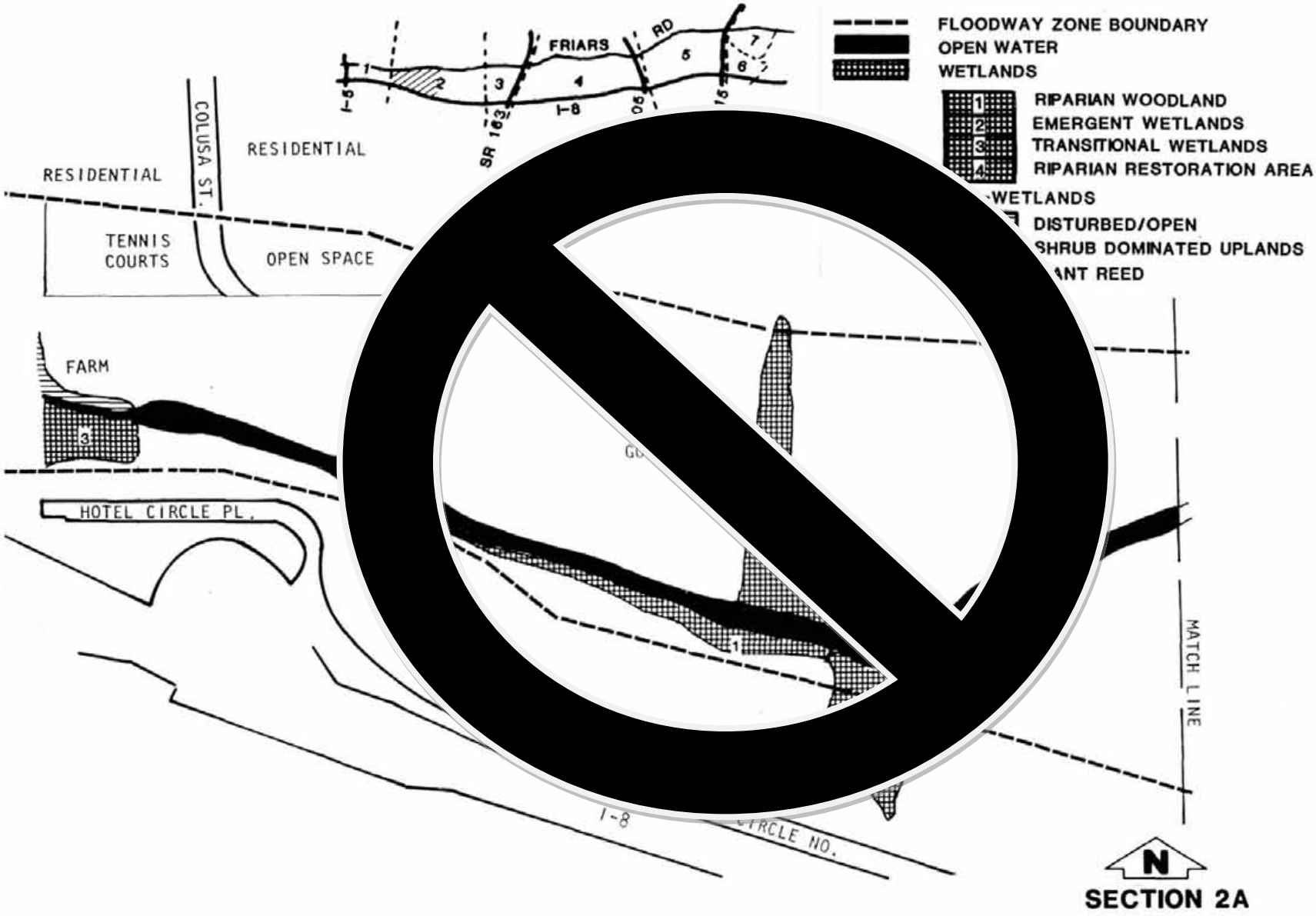
Natural vegetation is extremely limited in this area since a major use of the floodway is for golf courses (River Valley and Stardust). A farm and tennis courts (associated with a residential development and a hotel) also extend into the floodway. The river exists as a narrow channel through the golf courses. Remnant specimens of cottonwood and willow trees exist in isolated pockets: the most extensive occurring on an undeveloped parcel between the Stardust and River Valley golf courses. An area containing transitional wetlands exists outside of the FW zone on this parcel.

The area north and south of the FW zone is designated as a specific planning area in the draft Mission Valley Community Plan. Some land presently within the floodway (shown as (1) on **Figures 6** and **8**) could be recovered for development if proper flood control and wetlands restoration are accomplished.

A flood-control channel in this section must be capable of containing a 100-year flood (49,000 cfs) and support a viable wetlands corridor. Wetlands restoration must be incorporated into channel design and include the following habitat types: aquatics with vegetated islands, freshwater marsh, riparian woodland. A channel which meets the biological requirements for the creation of wetlands could be considered compensation for loss of existing riparian woodland and degraded wetlands (golf course) resulting from future development and road construction within the existing floodway. The creation of a biologically valuable river corridor through this section would sufficiently enhance the existing wetlands system to eliminate a need for compensating the loss of FW land on an acre-for-acre basis. Guidelines for the creation of wetlands are discussed under the section titled Guidelines for Habitat Development. Development plans for this area should be consistent with the criteria for development adjacent to the floodway described in this plan.

TABLE 3
WETLANDS ACREAGE IN SECTION 2

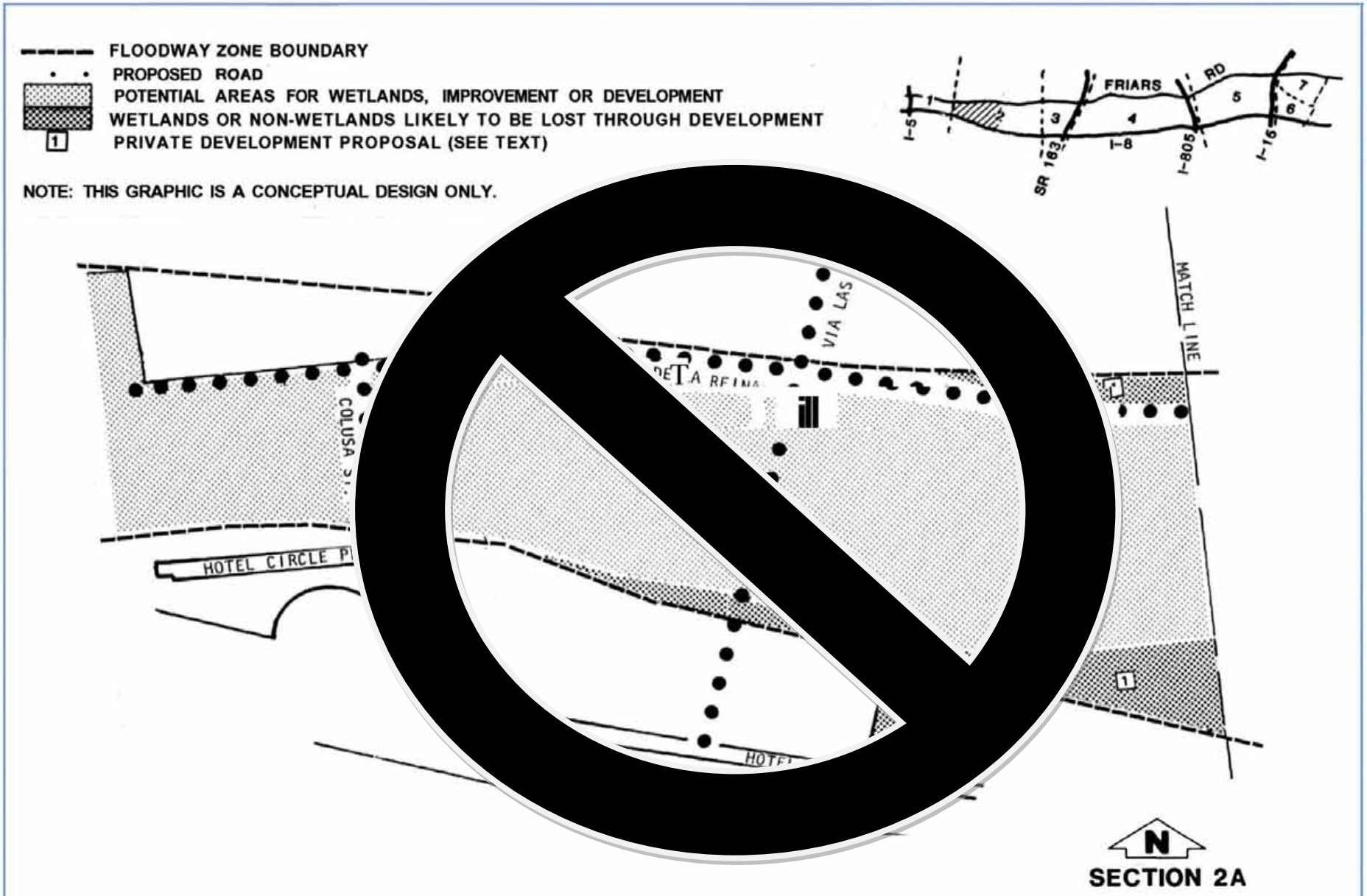
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	21	55	87	0
Open Water	11			
Freshwater Marsh	0			
Riparian Woodland	8			
Transitional Wetlands	2			
Non-Wetlands (Golf Course)	14			



Existing Habitats—Generalized

Mission Valley Community Plan

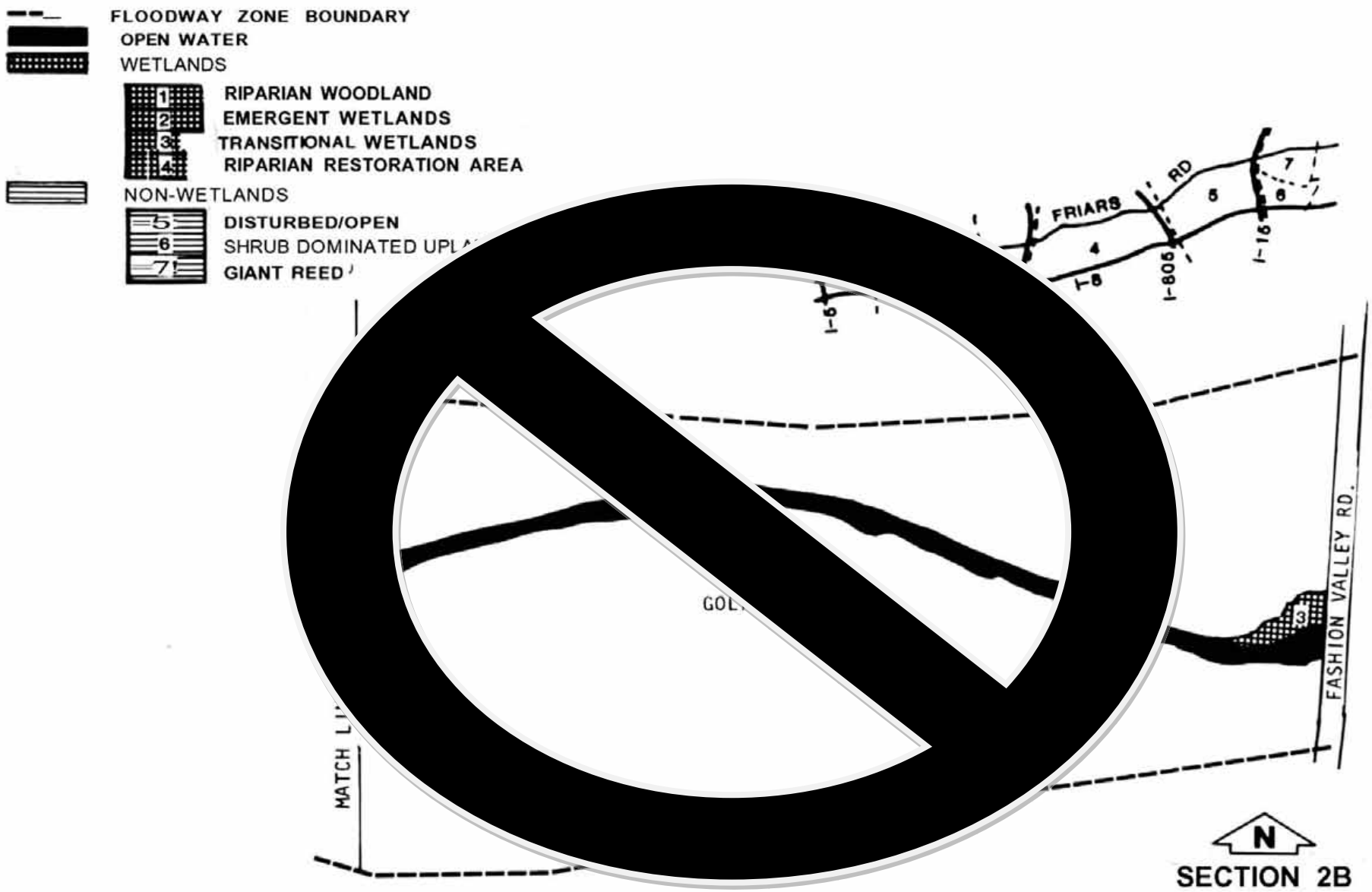
5 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

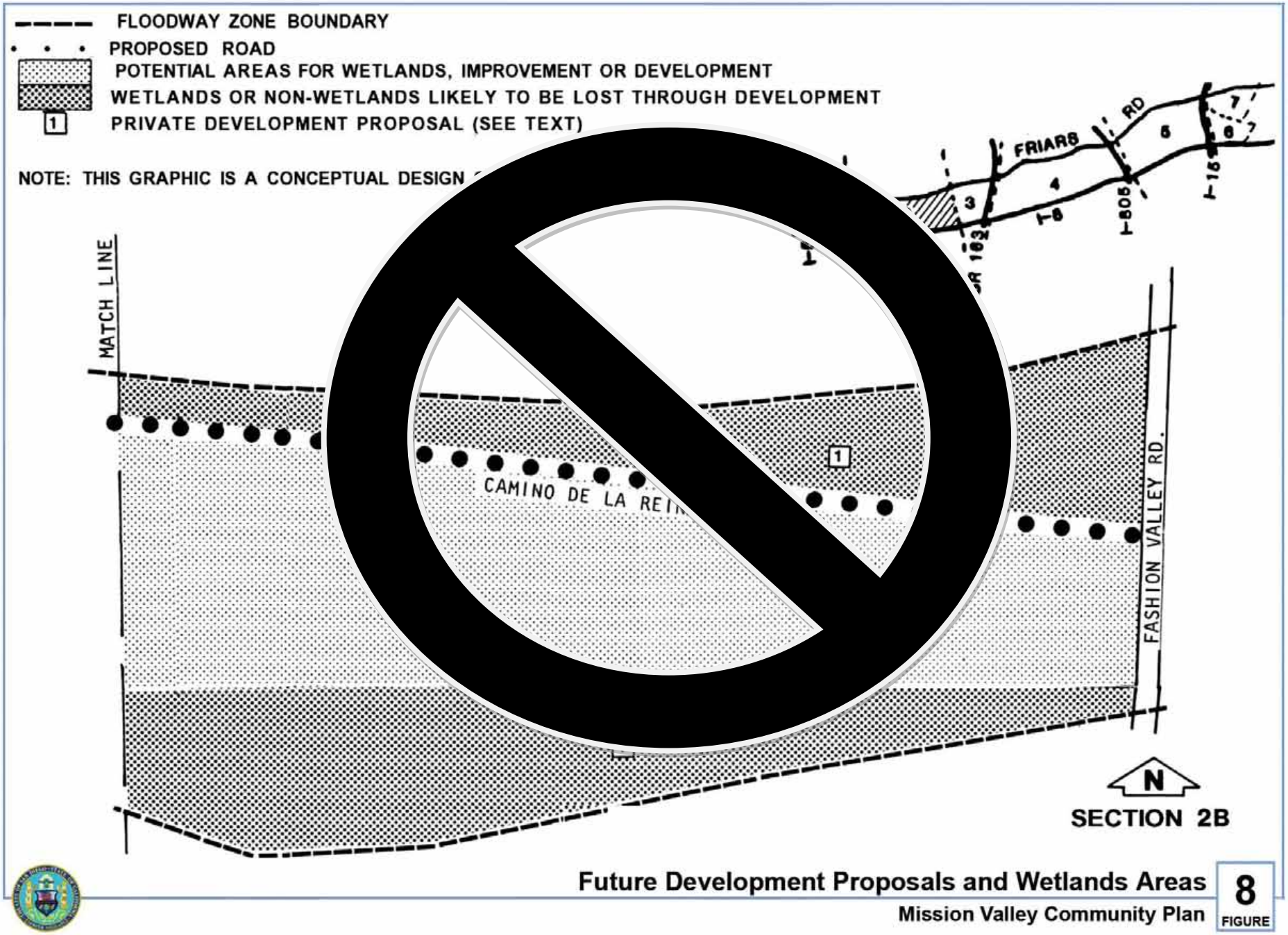
6 FIGURE



Existing Habitats—Generalized

Mission Valley Community Plan

7 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

8 FIGURE

SECTION 3 – FASHION VALLEY ROAD TO SR-163

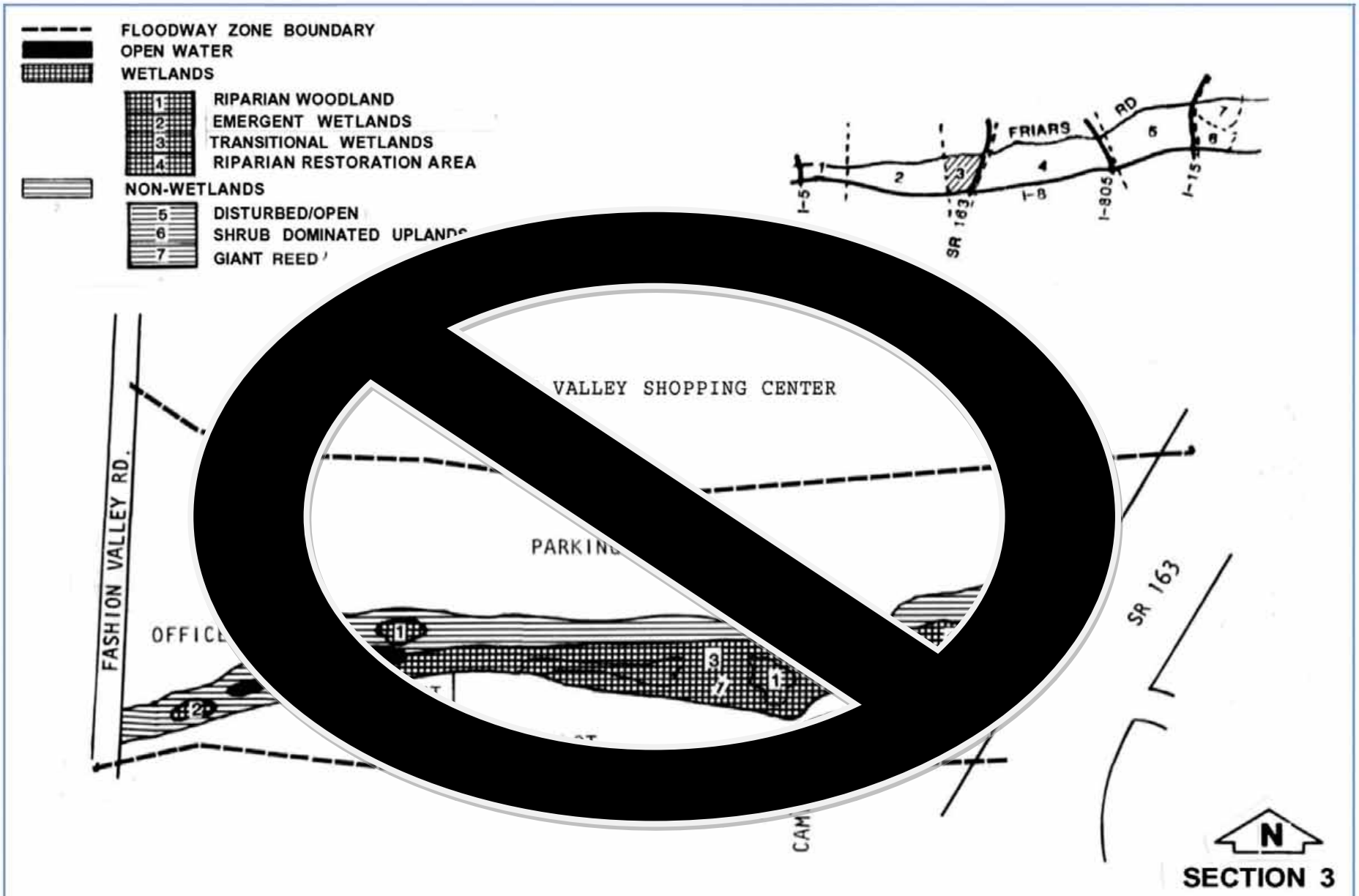
The floodway in this area has largely been developed with parking lots and a temporary office, leaving only a narrow corridor of wetland vegetation. With the exception of a few small stands of riparian woodland and marsh vegetation, this corridor is occupied by disturbed open habitat on the north bank and transitional wetlands on the south bank. A pilot channel varying in width from 70 to 95 feet was created in the eastern portion of this section. Existing vegetation was removed and riparian vegetation was planted approximately 0.5 acre north of the channel between Avenida del Rio and SR-163.

The planned extension of Camino del Rio through this section would further restrict available habitat. To maintain some biologic viability in this section, the corridor should not be narrower than 150 feet. This would allow for maintenance of the pilot channel and retention of wetland habitat on both sides of the channel. Compensation for the loss of wetlands should be provided on site through the conversion of non-wetlands and improvement of existing wetlands. Channel banks should be vegetated with a dense continuous band of cottonwoods, willows and appropriate understory plants. This would provide a riparian corridor connecting upstream and downstream sections of the river. Plantings should be dense so that the woodland also serves as a buffer from excessive human intrusion. Areas designated for conservation, previously restored and high-quality areas, are not available as mitigation sites.

TABLE 4

WETLANDS ACREAGE IN SECTION 3

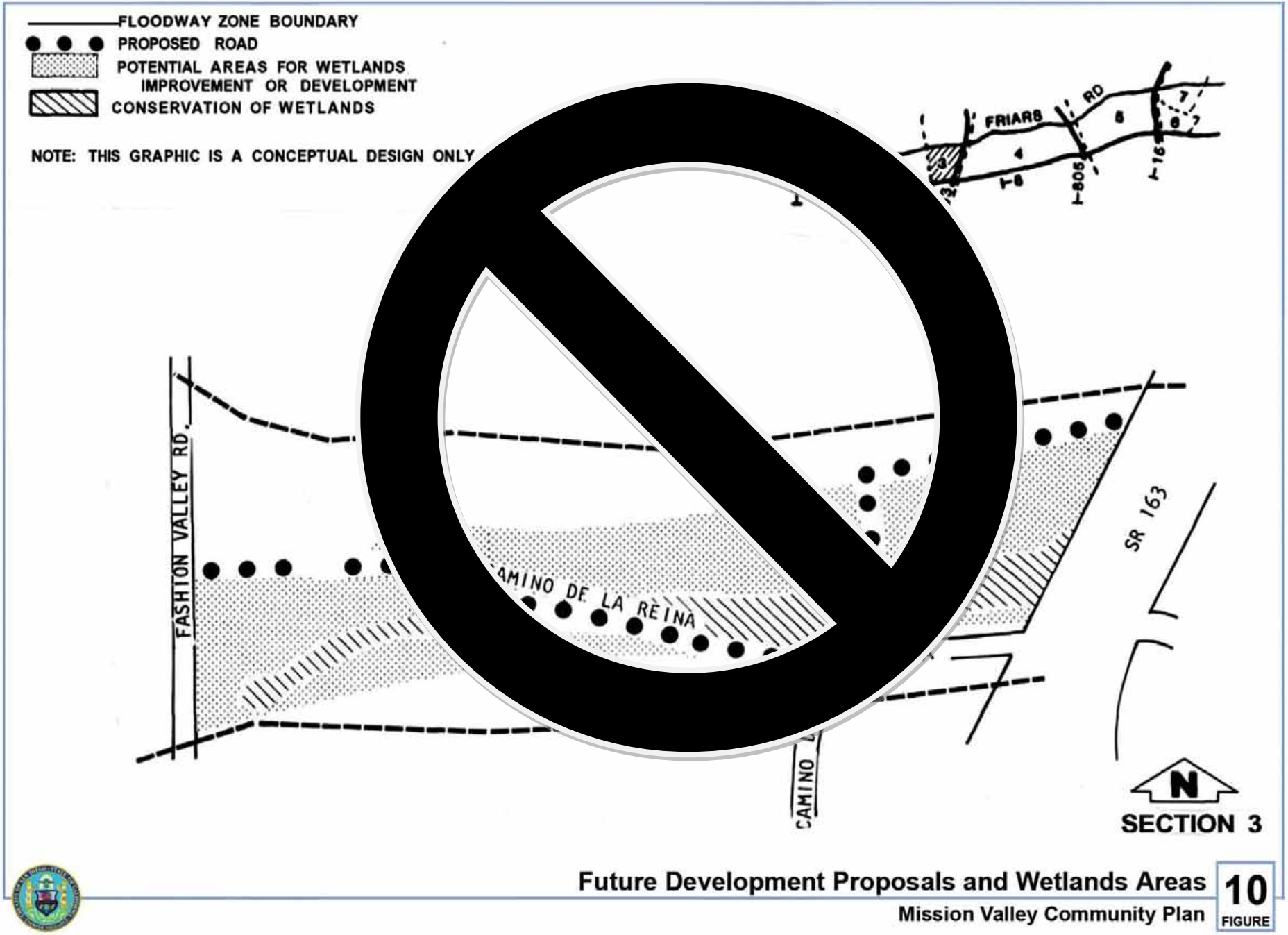
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	6	1	14	6
Open Water	1			
Freshwater Marsh	0			
Riparian Woodland	2			
Transitional Wetlands	3			
Non-Wetlands	5			



Existing Habitats—Generalized

Mission Valley Community Plan

9 FIGURE



Future Development Proposals and Wetlands Areas — **10** FIGURE

Mission Valley Community Plan

SECTION 4 – SR-163 TO 700 FEET EAST OF INTERSTATE 805 (FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT)

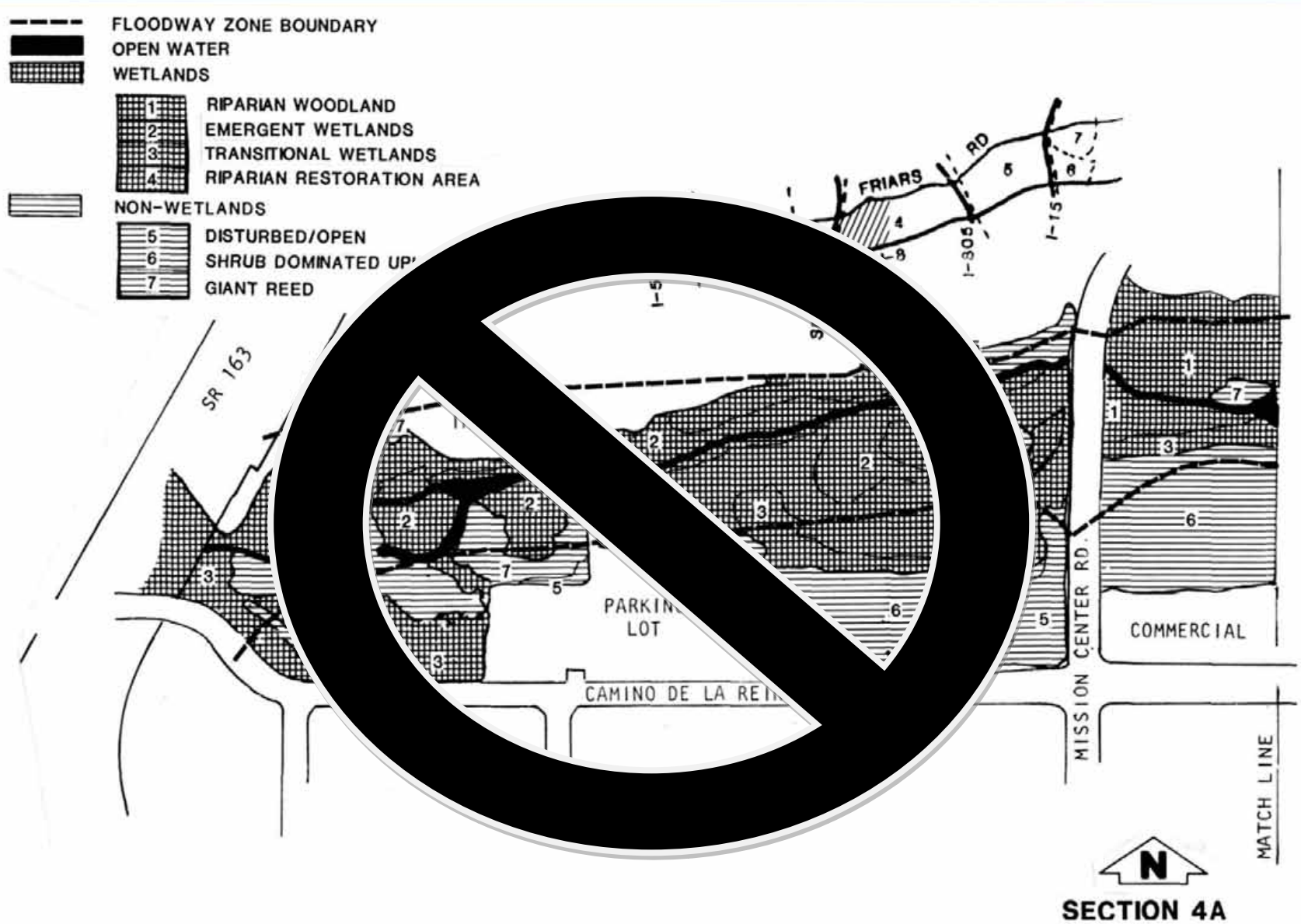
A variety of habitat types presently occupy the floodway. High-quality areas include open water, marsh and mature riparian woodland. Upland and transitional riparian vegetation provide supportive habitat. Natural habitat also occurs outside the floodway on private property on the south bank of the river just east of Stadium Way.

Most of the floodway and the adjacent area is part of the approved First San Diego River Improvement Project. As part of this project, the San Diego River between SR-163 and Stadium Way will be realigned and channelized. The new channel will be revegetated to recreate wetland habitats (aquatics, marsh and riparian woodland). The floodway east of Stadium Way will be retained in its present condition. In exchange for improving the river channel, the project will recover land within the floodway for development.

It is anticipated that the approximately 12 acres of existing habitat (transitional wetlands/uplands) just outside the floodway on the south bank of the river east of Stadium Way (shown as (2) on **Figure 16**) will ultimately be removed for future development on that parcel. This site contains transitional wetlands vegetation and is therefore subject to mitigation requirements. Compensation should entail improvement to the habitat adjacent to the floodway. At the time development is proposed, a site-specific evaluation will be required to determine the extent of the impact to wetlands and appropriate mitigation. This and other future projects which propose development outside the floodway will be subject to the requirements as described in the section, **Criteria for Development Adjacent to the Floodway**.

TABLE 5
WETLANDS ACREAGE IN SECTION 4

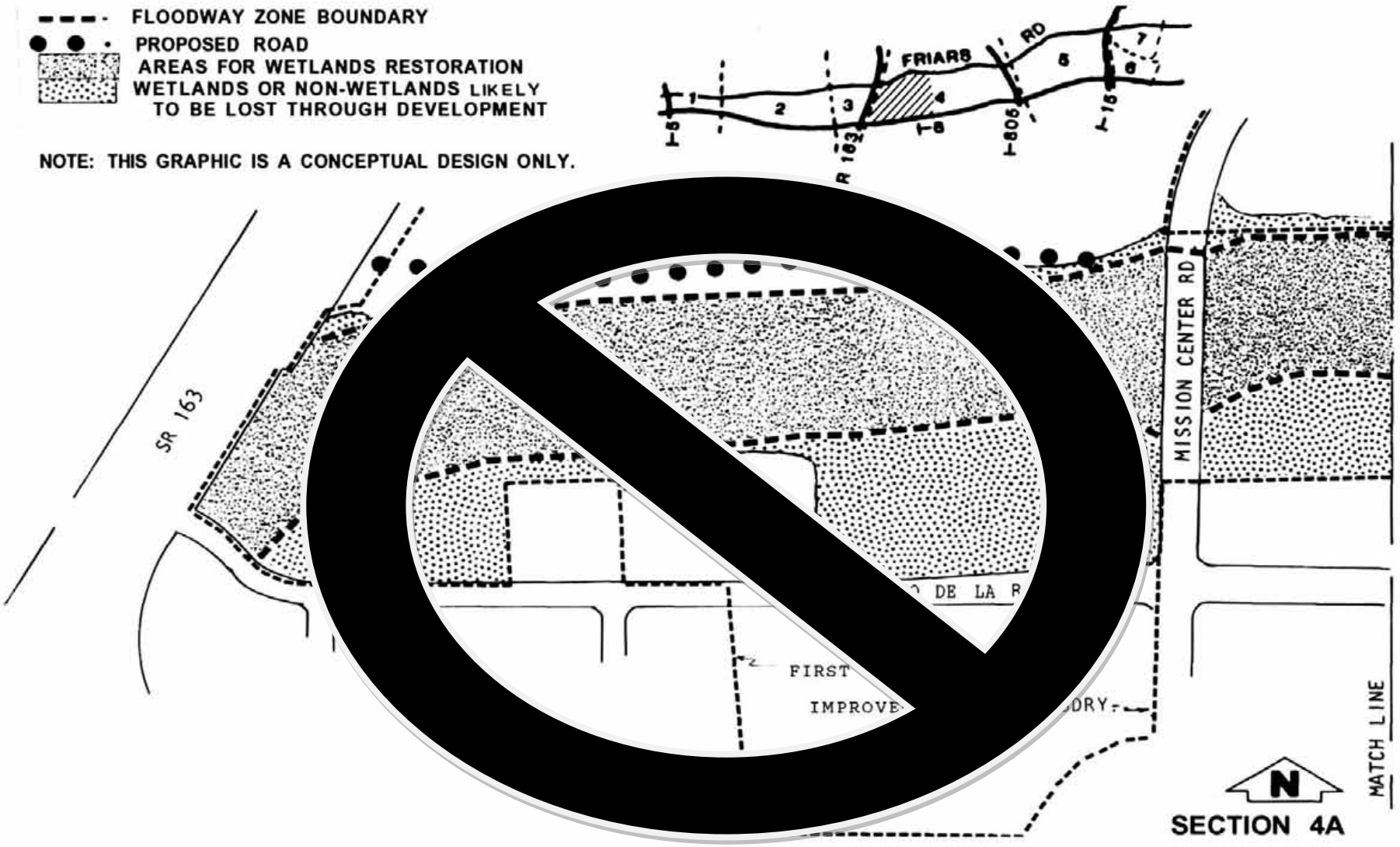
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	20	7	4	10
Open Water	4			
Freshwater Marsh	4			
Riparian Woodland	1			
Transitional Wetlands	11			
Non-Wetlands	1			



Existing Habitats—Generalized

Mission Valley Community Plan

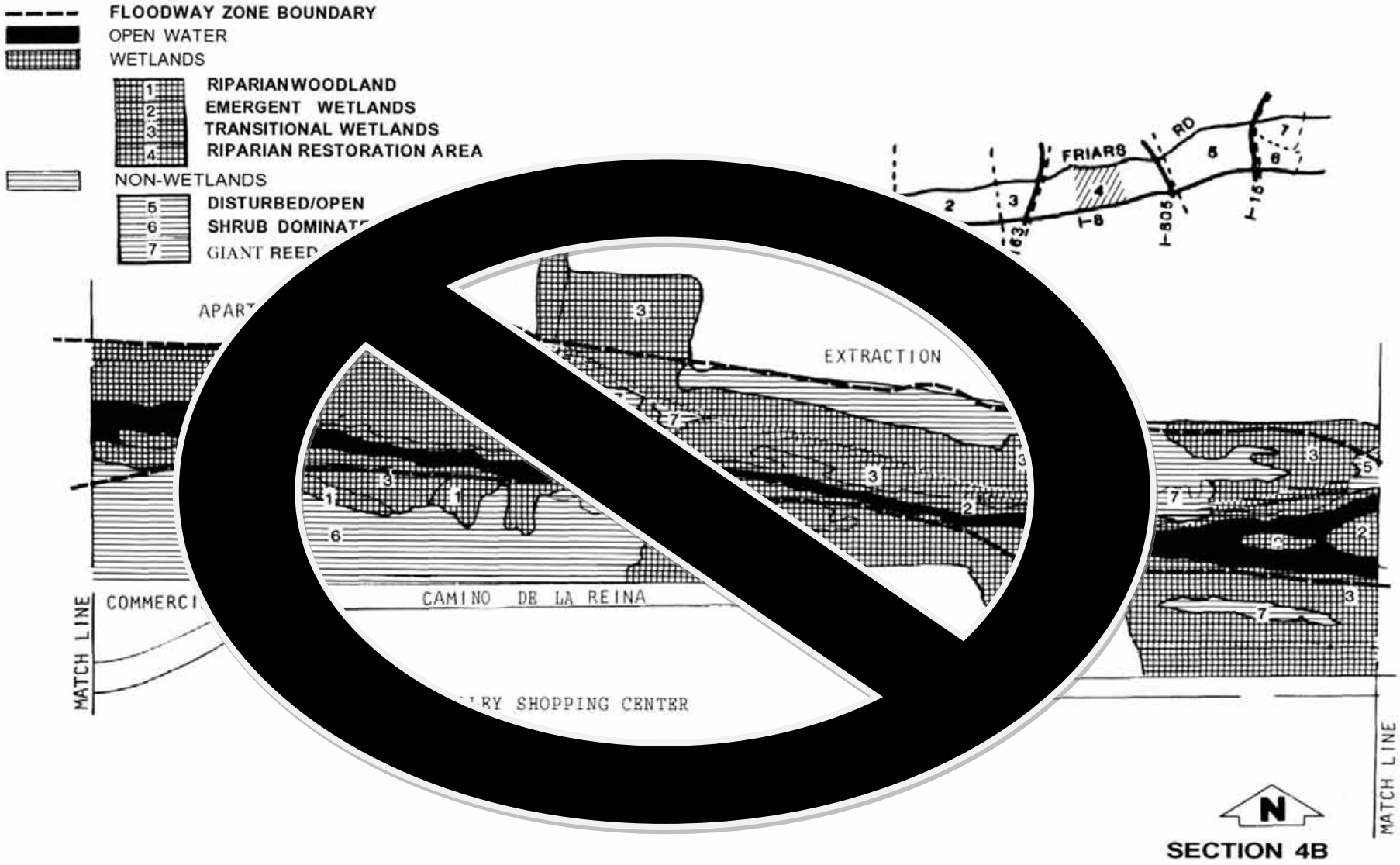
11 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

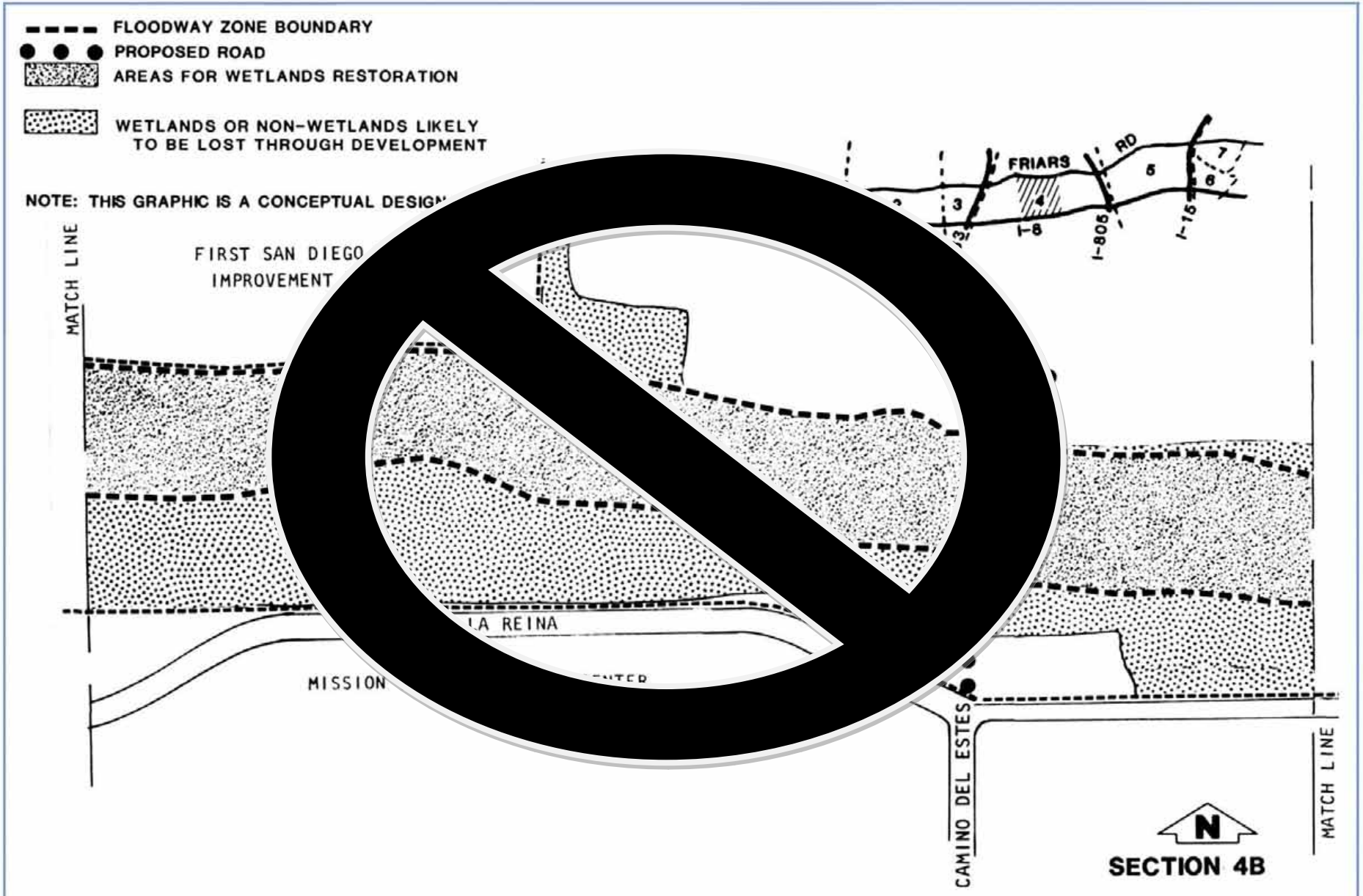
12 FIGURE



Existing Habitats—Generalized

Mission Valley Community Plan

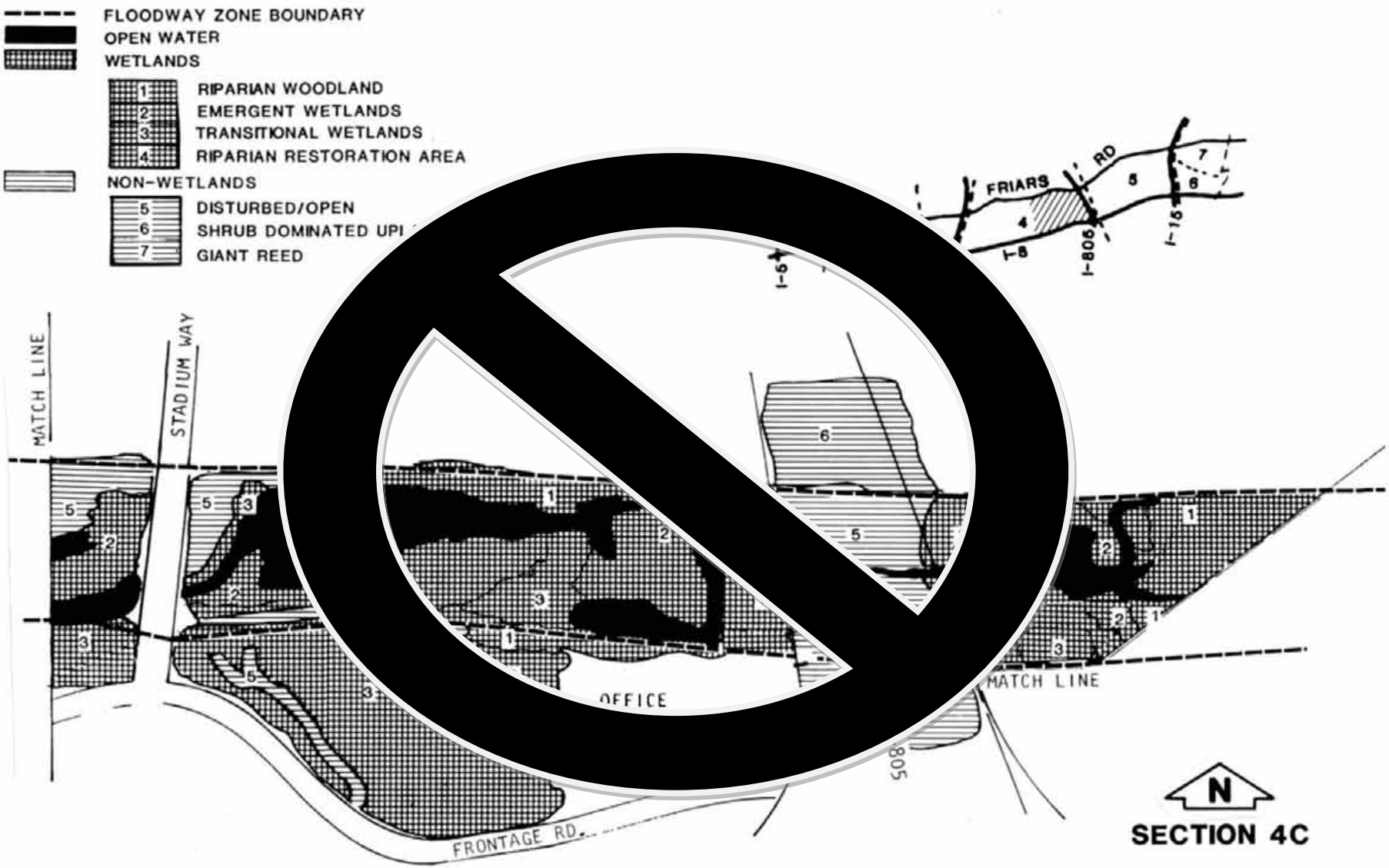
13 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

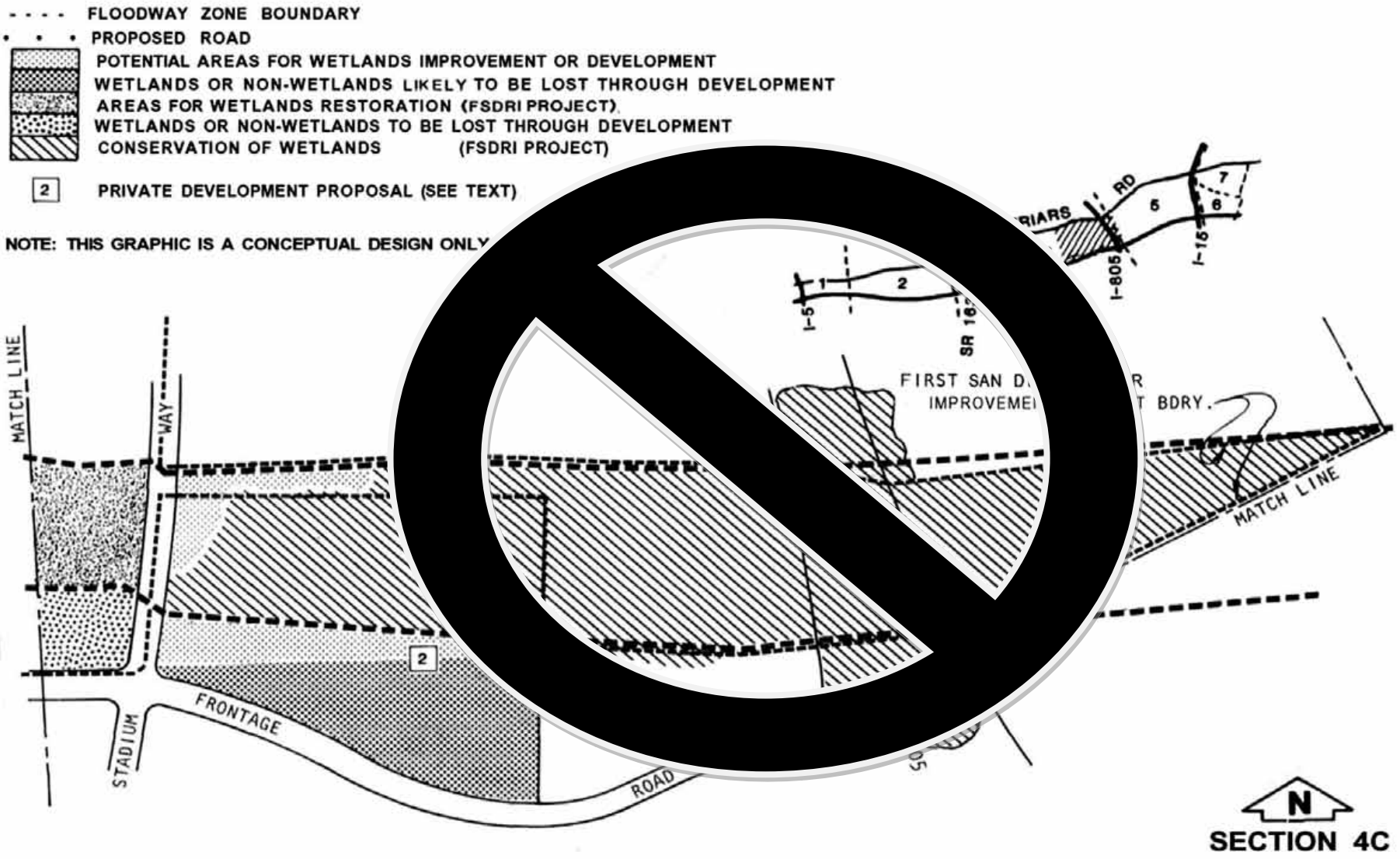
14 FIGURE



Existing Habitats—Generalized

Mission Valley Community Plan

15 FIGURE



Future Development Proposals and Wetlands Areas — **16** FIGURE

Mission Valley Community Plan

SECTION 5 - REMAINDER OF AREA EAST OF I-805 TO I-15

This section of the river is dominated by high-quality habitats including open water, mature riparian woodland, marshes and sandbars. The major portion of the floodway in this section is in City ownership, most of which is owned by the Water Utilities Department. Only a small portion of the floodway is in private ownership.

A compensation area for the Centerside development has been established within the floodway just west of Milly Way. This compensation program involved the conversion of uplands to wetlands and the preservation of riparian woodland.

Preliminary plans for development on the property adjacent to the Stadium (shown as (3) on **Figure 18**) include the retention of wetlands in and adjacent to the floodway. If the extension of Milly Way across the river is a condition of approval for this project, then compensation for the loss of wetlands due to the river crossing will be required as part of the project. Compensation for the loss of wetlands on site or associated with the Milly Way bridge should take the form of conversion of non-wetlands or improvement of low-quality or disturbed wetlands within or adjacent to the floodway on the property.

The City Water Utilities Department owns property outside the floodway both east and west of Milly Way. The area west of Milly Way supports mainly mature riparian woodlands. The area east of Milly Way supports transitional wetland vegetation. An experimental water reclamation plant will be constructed on a portion of the utilities property just north of Camino del Rio and south of the Stadium (see **Figures 17** and **19**). This plant is expected to be in operation for three years. Use of this property after the three-year period has not been determined.

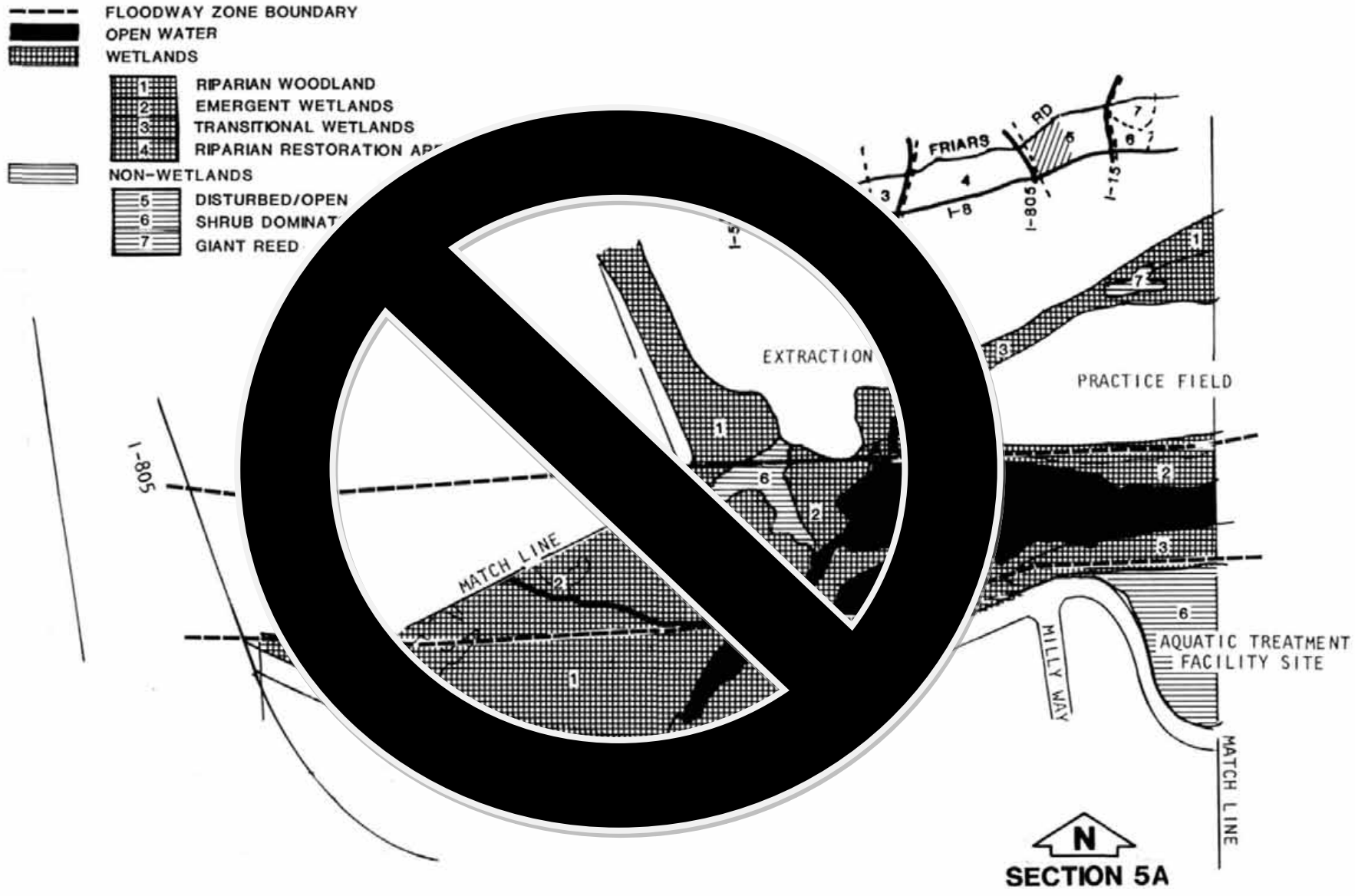
The City is presently considering options for development on City lands, including the Stadium parking lot, in this area. Consideration of wetlands must be a part of any future development plans. The floodway in this section is designated for conservation due to the quality of the existing wetlands. The only improvement which should occur within the floodway is the creation of a flood-control channel. Channel design should replace an equal quantity of wetlands. Wetlands, particularly the mature woodland, should be preserved wherever possible. Opportunities for creating additional wetlands include the recovery and conversion of lands 1) at the water reclamation site; 2) at the southerly end of the stadium parking lot; and 3) the practice field or the undeveloped area east and west of the practice field. First priority will be given to use of water utilities land as mitigation for development of the stadium properties, and second priority to other City projects. As a last priority, the land could be used to compensate for private development if it is demonstrated that the land will not be required for first or second priority projects, and adequate arrangements are made with the Water Utilities Department.

In the past, a 50-foot-long pilot channel was created from I-15 westward to carry storm waters. If future clearing of vegetation is needed in the absence of a permanent flood-control channel, mitigation will be required.

TABLE 6

WETLANDS ACREAGE IN SECTION 5

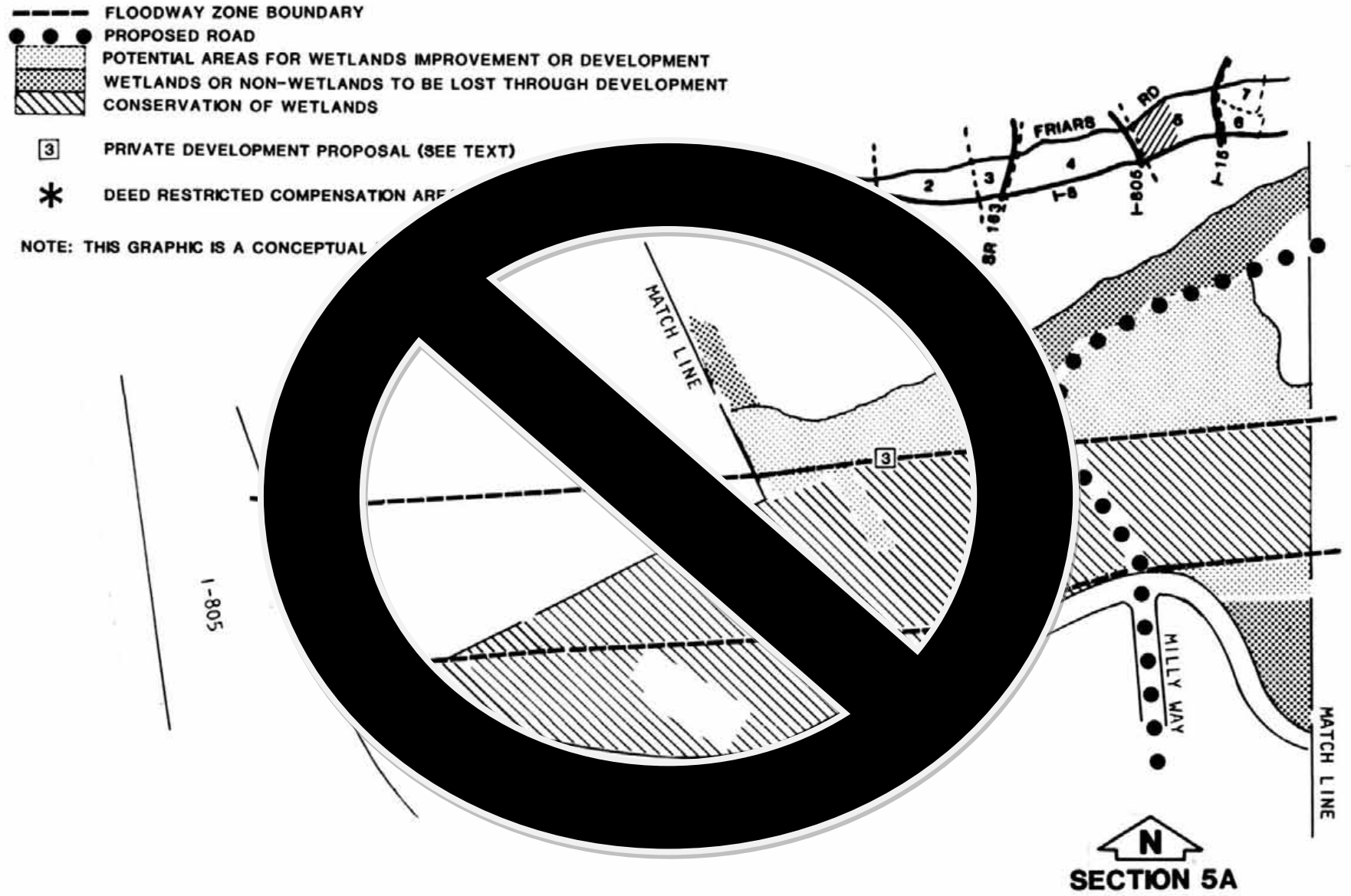
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	64	27	27	35
Open Water	12			
Freshwater Marsh	10			
Riparian Woodland	30			
Transitional Wetlands	9			
Restoration Area	3			
Non-Wetlands	19			



Existing Habitats—Generalized

Mission Valley Community Plan

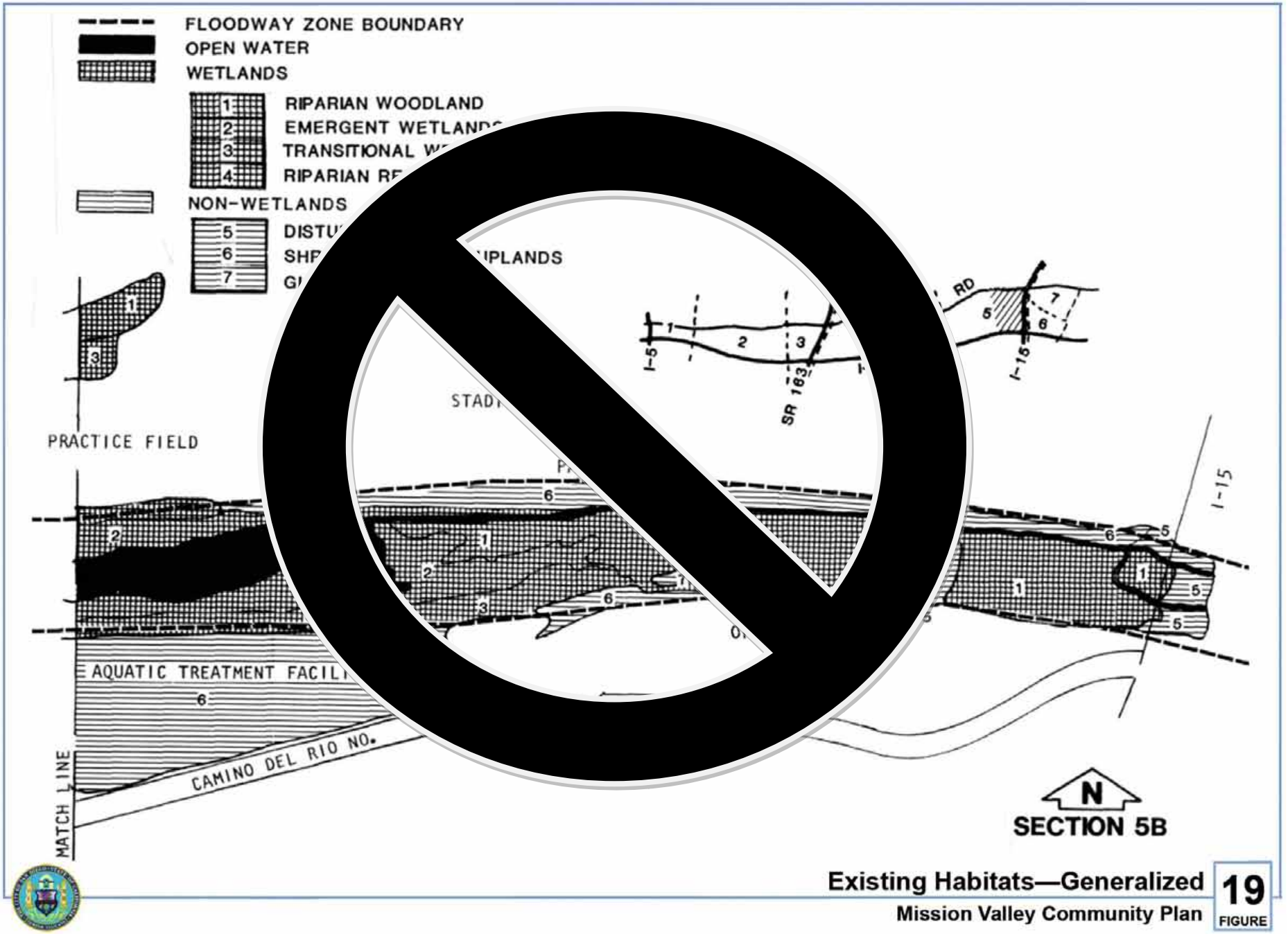
17 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

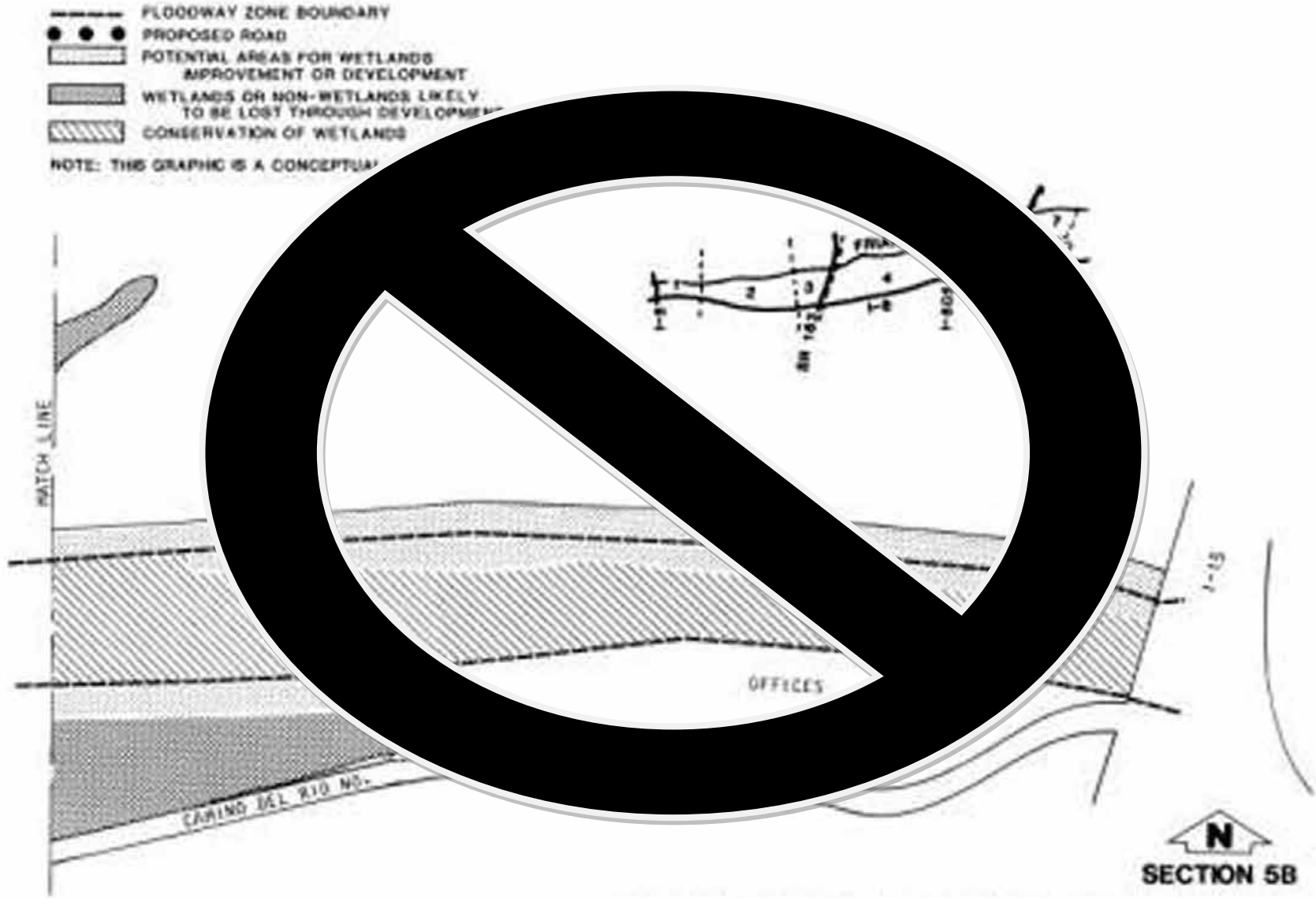
18 FIGURE



Existing Habitats—Generalized

Mission Valley Community Plan

19 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

20 FIGURE

SECTION 6 - INTERSTATE 15 TO SAN DIEGO MISSION ROAD

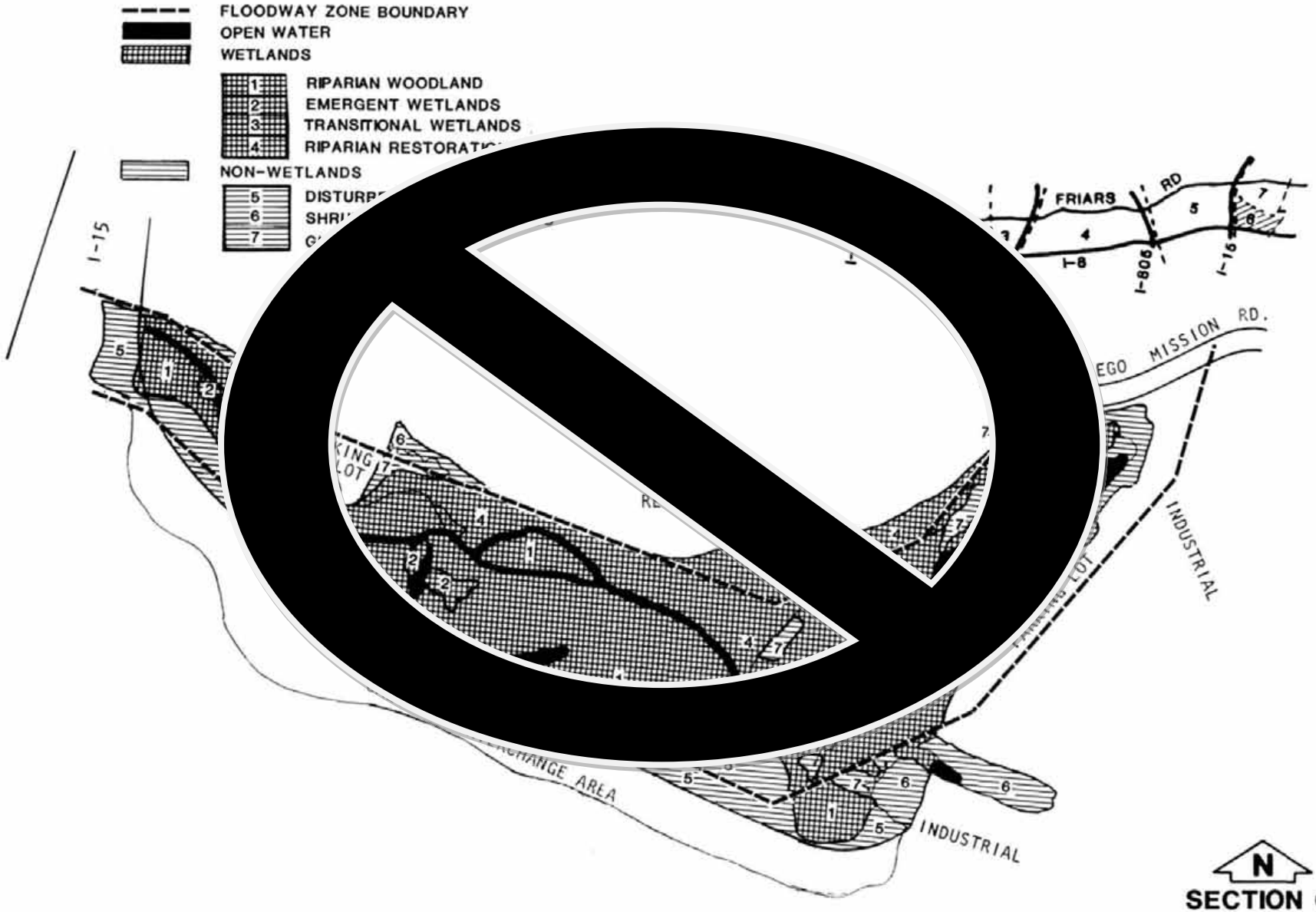
This section of the floodway is characterized by high-quality open water and riparian woodland habitats with disturbed areas on the periphery. Paced parking lots encroach into the floodway in the northwestern and southeastern portion of the section. Caltrans is presently improving the I-8/I-15 Interchange on the south side of the river. To compensate for the loss of wetlands associated with those improvements, Caltrans has converted an upland area on the north side of the river into a wetland restoration area in the north central portion of this section. The revegetation effort in the restoration area emphasized the planting of cottonwood trees with a fewer number of sycamores and willows.

The construction of Camino del Rio North from I-15 to Fairmount Avenue and the Rancho Mission Road bridge are planned improvements in this area and would eliminate wetlands habitat. Off-site compensation for Camino del Rio and the Rancho Mission Road bridge will occur on City-owned land in the western portion of Mission Valley.

The disturbed nonwetlands areas adjacent to the parking lots are potential areas for conversion to wetlands. The remainder of the area contains wetlands of relatively high quality and should be conserved. These areas are not available as mitigation sites.

TABLE 7
WETLANDS ACREAGE IN SECTION 6

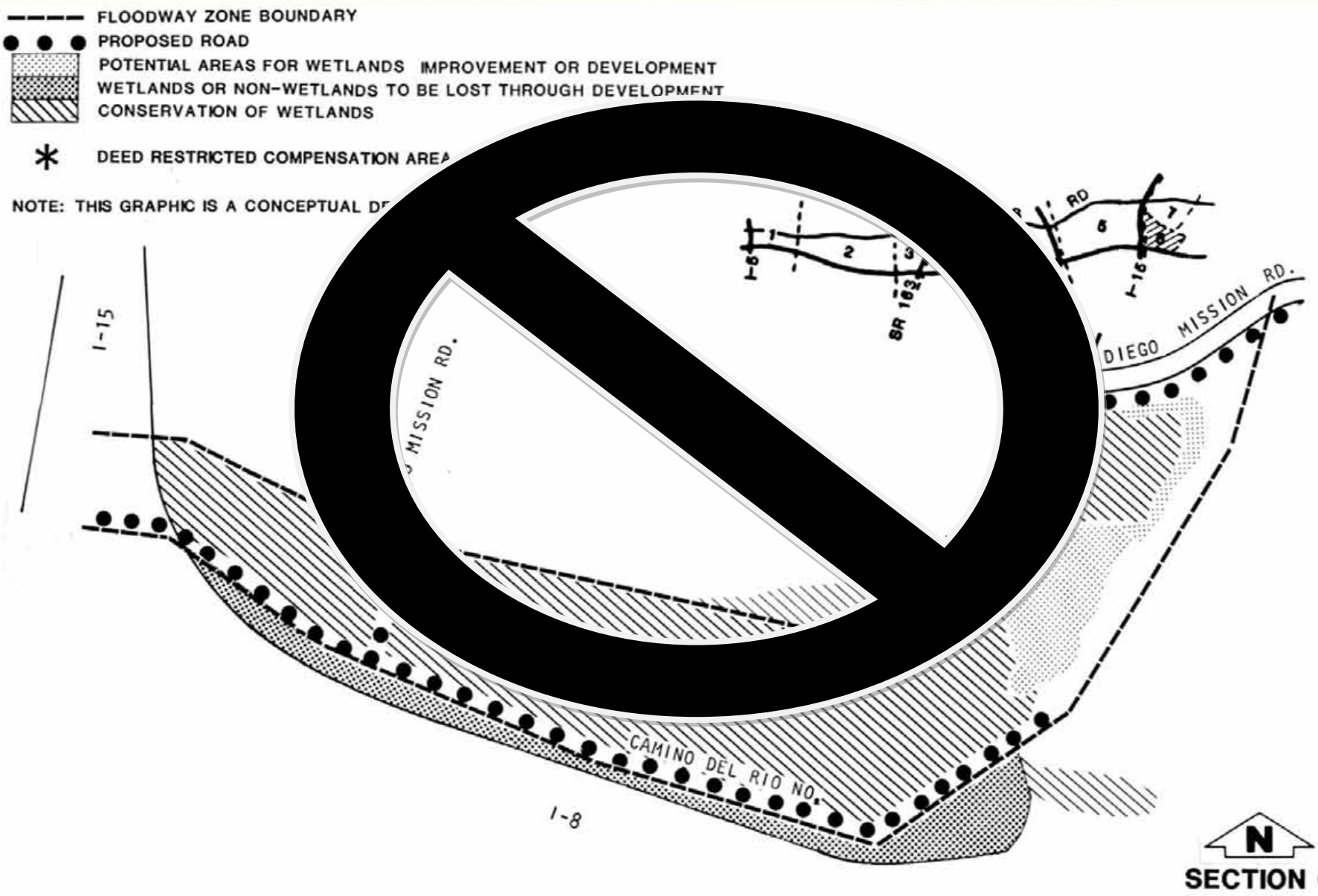
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	30	3	4	36
Open Water	6			
Freshwater Marsh	1			
Riparian Woodland	17			
Transitional Wetlands	1			
Restoration Area	5			
Non-Wetlands	13			



Existing Habitats—Generalized

Mission Valley Community Plan

21 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

22 FIGURE

SECTION 7 – SAN DIEGO MISSION ROAD TO FRIARS ROAD

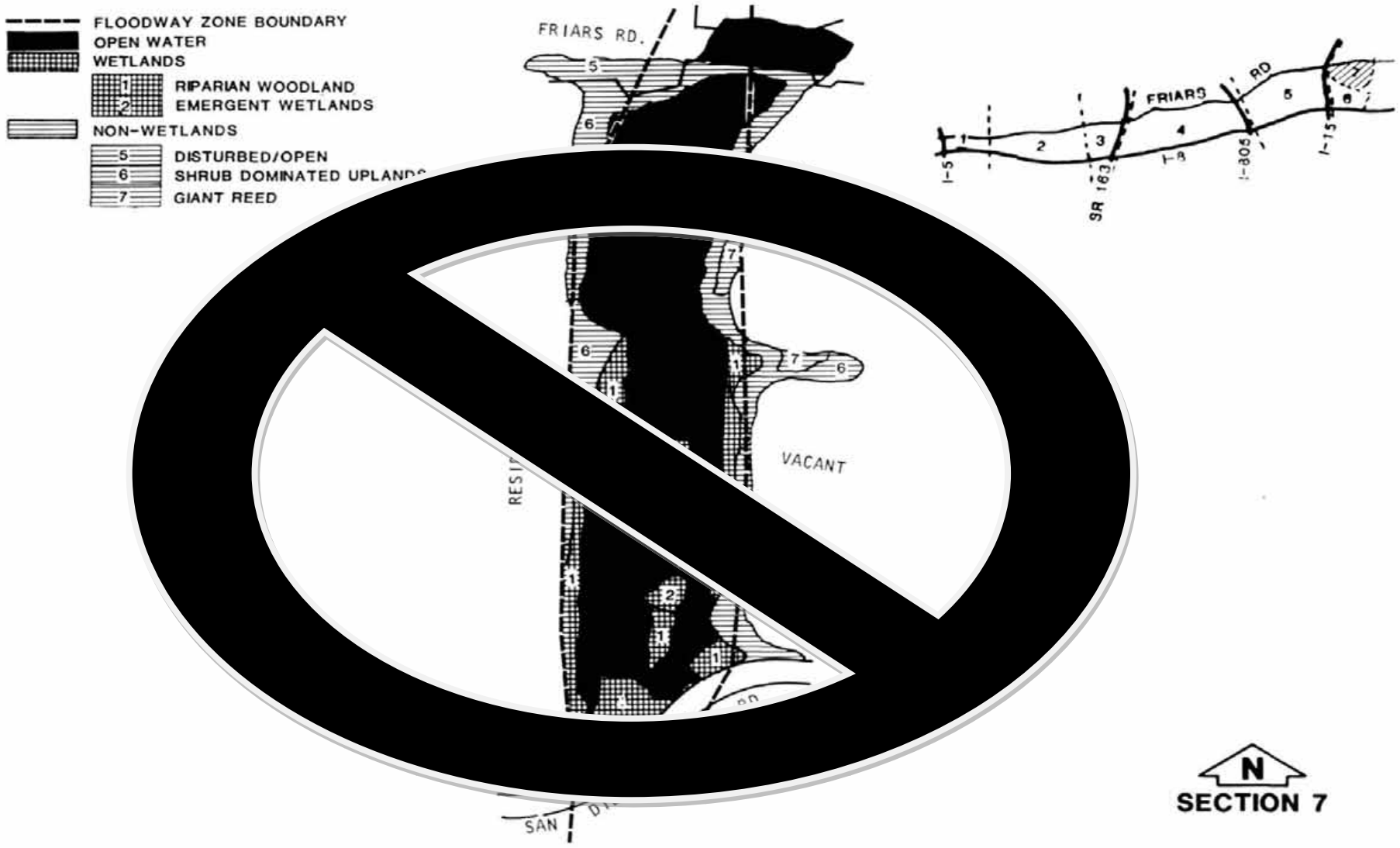
Previous excavation activities here have created high-quality wildlife habitats consisting of open water, riparian woodlands and marsh. This area has the largest expanse of open water relative to cover in the entire study area. Islands and a peninsula are present and provide a fish-foraging area for water birds. Shrub-dominated vegetation borders these habitats. A vacant graded parcel and storage yard are elevated above the floodway on the southeast bank. Steep shrub-covered slopes provide an effective buffer zone on the northwest.

Other than the planned widening of Friars Road and improvements to San Diego Mission Road, no improvements in the floodway are planned. The floodway should be conserved and no reduction in habitat in this area should occur. Opportunities for habitat improvement include the conversion of uplands along the riverbanks to riparian woodland. An emphasis should be placed on planting of cottonwood trees and development of emergent marsh.

The eastern bank of the river is part of the Navajo Community Plan area. This area is undeveloped or developed with low-intensity uses. Any future development including that shown as (4) on **Figure 24**, is subject to the Criteria for Development Adjacent to the Floodway.

TABLE 8
WETLANDS ACREAGE IN SECTION 7

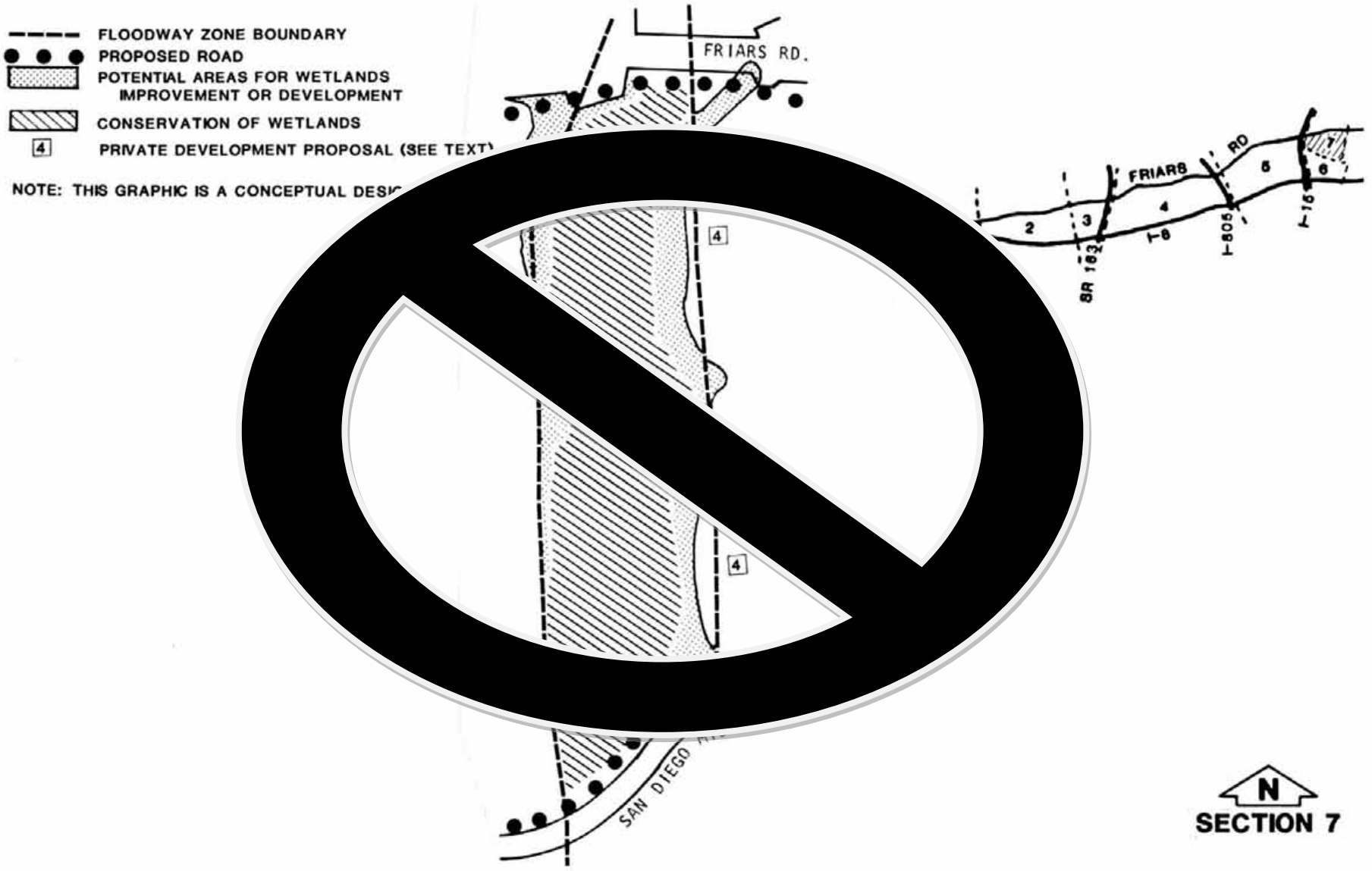
Section	Existing Wetlands	Projected Loss of Floodway	Land Potentially Available for Habitat Improvement or Conversion	Conservation of Wetlands
Total Wetlands	24	2	6	24
Open Water	19			
Freshwater Marsh	1			
Riparian Woodland	4			
Non-Wetlands	8			



Existing Habitats—Generalized

Mission Valley Community Plan

23 FIGURE



Future Development Proposals and Wetlands Areas

Mission Valley Community Plan

24 FIGURE

GUIDELINES FOR HABITAT DEVELOPMENT

This section of the Wetlands Management Plan addresses the techniques for creating wetlands along the river. Contained herein are guidelines and requirements for the creation and improvement of wetland habitats and a description of the extent and types of plantings to be used. **Figure 25** illustrates how wetlands should be incorporated into river channel design. A list of recommended plant species for revegetation is provided in **Appendix D**.

Creation of Wetlands Habitat

Since wetlands will be an integral part of a flood-control facility, channel design shall incorporate a wetlands corridor composed of the following distribution of habitat types.

Open Water	20-40%
Freshwater Marsh	25-35%
Riparian Woodland	35-45%

Individual segments of the channel should incorporate the same guidelines so that this distribution will be effective Valley-wide.

Islands should be created within the open water area to provide shelter and habitat diversity for wildlife. Islands should cover approximately five to 15% of the length of any particular segment of the river channel. If, for hydraulic reasons, it is not possible to incorporate islands into the floodway, a corresponding quantity of marsh and woodland habitats should be created. Channel design should maximize the retention of existing vegetation, particularly mature woodland. Existing vegetation can be incorporated into the channel banks or islands. Where existing vegetation must be distributed by the establishment of the facility, the channel shall be revegetated to create a wetlands corridor.

Mitigation will be directed to areas of upland habitat or areas where natural wetlands have been degraded or no longer exist. In these areas, wetlands should be developed or restored by the creation of new wetland habitats, which generally follow the distribution outlined above. This distribution can be altered if site-specific evaluation identifies a need for the concentration of a particular habitat type.

Biological Requirements

To maximize the potential wildlife value of the habitat, the following biological requirements must be incorporated into compensation and flood channel proposals.

- Use only appropriate plants native to coastal southern California in revegetation.

- Create vertical and horizontal plant diversity.

- Incorporate both mixed and pure stands of trees.

- Create an irregular rather than straight shoreline or border between habitat types to maximize the amount of edge between habitat types.

- Create wildlife nodes or areas of concentration where vegetation is especially dense and extensive.

- Use specialized plantings to serve as barriers to human access in wildlife nodes or in areas with little or no buffer between the wetlands and development. Specialized plantings would consist of brambly species or those with a thicket-like growth form that would discourage human access.

- Dredging and construction of a floor-channel should not disrupt breeding which occurs from April 1 – August 1. Clearing of vegetation should be accomplished prior to April 1. If this is not practicable, there must be a phasing plan that provides for the retention of natural vegetation within the same river section.

Description of Habitat Plantings

A description of the habitat types and composition to be created in revegetating the floodway is provided below.

Riparian Woodland

Riparian woodland should consist of two association types: cottonwood and willow, as defined below.

- The cottonwood association should consist of the following elements in roughly these proportions: cottonwoods, 50 percent; willows (should be at least two species: *Salix gooddingii var variabilis, S. lasiandra, S. laevigata, S. lasiolepis)*, 30 percent; Sycamore, five percent; shrubs and herbs, 15 percent.

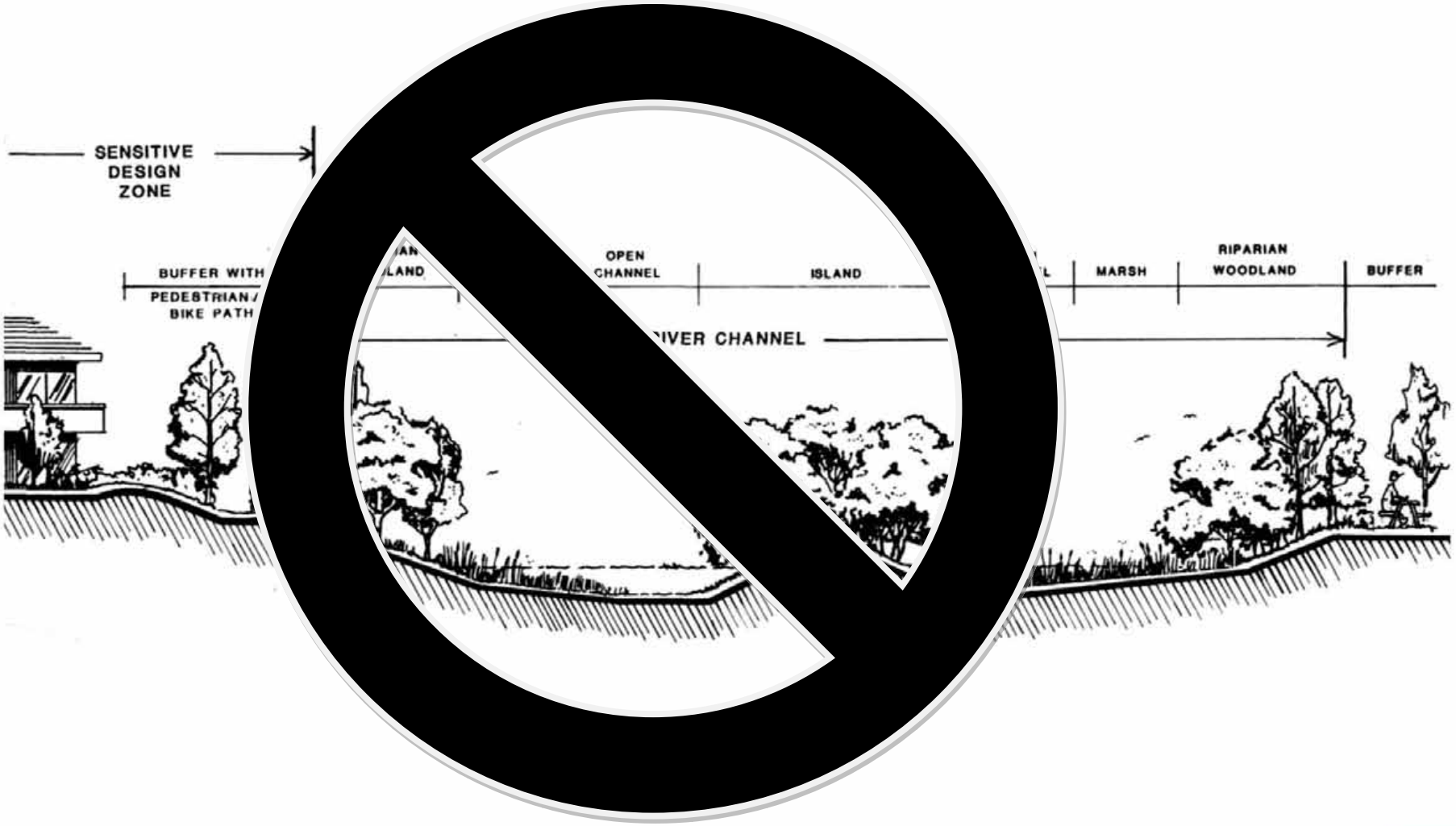
- The willow association should consist of the following elements in approximately these proportions; willows, 70 percent; cottonwood 15 percent; shrubs and herbs, 15 percent.

Trees should be unevenly spaced with a density of roughly 100 trees per acre. A description of the riparian woodland elements identified above is as follows:

- Cottonwood - Fremont cottonwoods should be planted in groves, in association with willows.

- Willow - This should be a mix of the willow species listed above and should always include *Salix gooddingii var. variabilis* and be accompanied by the shrub-herb riparian association.

- Western Sycamore - Plant in open groves toward the top of the bank.



Cross-Section of River Channel Design

Mission Valley Community Plan

25
FIGURE

- Coast Live Oak - These trees may occasionally be used in dry, transition areas and on top of banks.

- Shrub-Herb Riparian Association - This planting should include flowering and fruiting native shrubs, vines and herbs adapted to coastal floodplain habitats. This association should form the predominant understory for the riparian woodland, and occur in woodland openings. Wild rose (*Rose californica*) and California blackberry (*Rubus ursinus*) should always be included in this plant association.

Freshwater Marsh

Freshwater marsh vegetation should be allowed to establish naturally near the water's edge river banks, backwater ponds, and surrounding islands.

Groundcover

Groundcover should be used to provide food and cover and control erosion in areas where vegetation has been cleared and/or revegetated. Groundcover can be planted by hydroseeding with a mix which includes species of food value, such as doveweed or sweet clover, and does not include nonnative weedy species.

Quantitative and Qualitative Mitigation Requirements

It is a policy of this plan that there shall be no net reduction of wetlands and that mitigation for projects affecting wetlands shall contribute to the overall qualitative improvement of the resource. The following requirements have been designed to ensure that the overall quantity and quality of the wetlands are maintained.

In general, wetlands shall be replaced on an acre-for-acre basis. Individual habitat types shall also be replaced on this basis unless it is determined that an alternative habitat would be of greater value. Loss of FW land containing non-wetlands shall generally be compensated by the creation of wetlands on an acre-for-acre basis. A less than acre-for-acre compensation would be acceptable where wetlands are restored by incorporating a wetlands corridor into a flood control system in an area of the floodway presently devoid of wetlands habitat (i.e., the golf course in Section 2). This reduced mitigation is predicated on the fact that the creation of a wetlands corridor which meets the biological requirements of this plan would significantly contribute to the overall enhancement of the habitat value of the San Diego River wetlands.

Mitigation for the loss of riparian woodland requires special treatment to ensure that the habitat value is offset. Wooded wetlands, especially those dominated by mature trees, are of high habitat value and their reconstruction cannot rapidly or with certainty provide an equivalent value to that destroyed. Therefore, compensation for the loss of woodland must meet additional requirements.

These include:

- Revegetation shall be according to state-of-the-art techniques;

- Trees to be planted shall vary in size and include trees of large stature;

- The newly-created woodland shall be of limited accessibility and protected from human disturbance;

- There shall be milestones for identifying deficiencies in the revegetation effort;

- There shall be a means of assuring that corrective action will occur in a timely manner; and

- There shall be a means of assuring the long term preservation of the habitat.

If these requirements cannot be met, compensation for the loss of woodland shall be at a ratio of 2:1 (two acres replaced for each acre lost) or greater to provide an equivalent habitat value.

~~CRITERIA FOR DEVELOPMENT ADJACENT TO THE FLOODWAY~~

~~Although development adjacent to the floodway may not directly eliminate natural habitats, it could have indirect effects on wildlife associated with the river. A sensitive zone extending 150 feet from the wetlands corridor requires special consideration to protect the wildlife value of the wetlands corridor.To minimize impacts and protect the wildlife value of the wetlands, the following criteria should be incorporated into development plans within this sensitive zone.~~

- ~~A buffer area between the wetlands corridor and development is required along the entire length of both sides of the river. The buffer will serve as a biologic feature primarily and as an aesthetic feature secondarily. The biological function of this buffer would be to provide separation and screening of the wildlife habitat from human activity associated with development. It will also provide habitat edge and diversity, as well as additional cover, forage and roosting opportunities. At no particular location shall buildings intrude into the wetlands corridor. The actual width of the buffer may vary depending on the type of development proposed, sensitivity of the habitat to be protected and manner in which the buffer is treated. However, the average width of the buffer shall not be less than 20 feet. This buffer area should be planted with appropriate vegetation native to coastal southern California. Land uses within the buffer areas shall be limited to bikeways, walkways and passive recreation uses described below.~~

- ~~Public recreation along the river corridor should include only passive uses such as hiking, nature study, viewing, and picnicking. Designated pathways should be located along the outer edges of the wetlands and lead to specified recreation areas. Access to the wetlands in other areas should be discouraged through the use of specialized plantings.~~

- ~~Buildings should be designed so that the skyline slopes down toward the wetlands. Low-story buildings should be located closest to the floodway channel with high-rise buildings away from the floodway. This will allow a wider flight path for birds.~~

- ~~Reflective plate glass should not be used on building facades that face the river. In a wooded setting, reflective plate glass buildings cause high bird mortality.~~

- ~~Lighting as required for safety must be directed rather than general and should not illuminate habitat areas.~~

IMPLEMENTATION

Relation to Community Plans

Planning for the protection of resources associated with the San Diego River is an integral part of the Mission Valley Community Plan. As such, the Wetlands Management Plan is an element of that community plan. The Wetlands Management Plan should be used in conjunction with the other elements of the community plan to guide development along the San Diego River in Mission Valley.

Since the Wetlands Management Plan includes a portion of the Navajo Community Plan area, the plan should also be used to guide development in the Navajo community. Upon adoption of the wetlands plan as part of the Mission Valley Community Plan, the Navajo Community Plan will be amended to incorporate the Wetlands Management Plan.

Federal and State Agency Permits and Agreements

In addition to permits from the City of San Diego, project applicants will be required to obtain a U.S. Army Corps of Engineers 404 Permit and a California Department of Fish and Game 1601/1603 Agreement for projects which involve alteration of wetlands and the streambed of the San Diego River. The Wetlands Management Plan was undertaken, in part, to facilitate and expedite the federal and state permit process. This plan provides the basis for a common understanding among government agencies, including the City of San Diego, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service and California Department of Fish and Game, and private interests, regarding projects affecting wetlands and the manner in which wetlands mitigation is to be accomplished. Representatives of the U.S. Fish and Wildlife Service and the California Department of Fish and Game actively participated in the preparation of this plan to ensure that the mitigation requirements are consistent with the policies of their agencies. Therefore, it is anticipated that projects which have been planned in conformance with the Wetlands Management Plan will meet the requirements of the other agencies, and permit processing can be simplified and the time minimized. This will provide increased certainty to applicants concerned with the protection of wetlands.

Federal and state resource agencies will be notified of all activities relating to the Wetlands Management Plan, including applications for land development and floodway modification proposals. A mitigation plan for individual projects shall also be submitted to these agencies. This will allow resource management agencies an early opportunity to review and comment on these projects. If approval of the mitigation plan is obtained during the City's review process, federal and state permit processing will be greatly expedited.

Development Responsibilities

The Wetlands Management Plan covers two general categories of proposals:
1) channelization of the San Diego River; and 2) development within the floodway which would eliminate existing habitat. Proposals in either of these categories incur a responsibility for mitigation due to their direct or indirect effect on wetlands. It shall be the responsibility

of the applicant to plan, carry out and maintain the mitigation effort. The applicant is also responsible for consulting with the state and federal resource agencies early in the planning process. A list of agencies for consultation is included in **Appendix E**.

Mitigation Planning

In conjunction with any development plans, the project applicant shall have a biological consultant conduct a site-specific field survey to determine the type and extent of vegetation on the project site and to identify mitigation sites. The field work and consultation must be performed by a qualified biologist with wetlands experience.

The applicant shall submit a revegetation plan, prepared by the biological consultant who may work with the applicant's landscape architect and/or planner, to outline a mitigation proposal. The revegetation plan shall contain a landscape architect and/or planner, to outline a mitigation proposal. The revegetation plan shall contain a landscape plan and address in detail the compensation concept and design criteria, the types and extent of habitats to be developed, plant materials to be used, method of planting, plans for management maintenance and monitoring of the revegetation and treatment of the interface between development and the river corridor. If the plan calls for the replacement of riparian woodland, it shall also demonstrate how the specific mitigation requirements will be met. The revegetation plan shall be reviewed and approved by the City before project approval.

There shall be a binding mechanism to assure that the applicant will carry out and maintain the mitigation effort as planned. This binding mechanism can be in the form of a bond, an agreement as part of an assessment district established to fund a flood control channel, or other means of assuring that funds will be available to complete the mitigation program.

Mitigation Implementation

The mitigation program shall be carried out according to the revegetation plan preceding or coincident with project construction. Trees shall be planted in holes which are augured to groundwater level. An irrigation system shall be installed to water plants until they have become established.

Mitigation Maintenance

The applicant shall be responsible for maintaining the mitigation wetlands for five years from the date the planting has been completed. Two maintenance programs: replacement of vegetation and elimination of undesirable species shall be performed as part of the mitigation effort.

Replacement of Vegetation

All trees and shrubs which die or are otherwise damaged in the first five years due to flooding, disease, over-rot, under-watering, vandalism, etc., shall be replaced by the applicant. Vegetation shall be monitored on a regular basis and shall be replaced as needed to fulfill the conditions of the revegetation plan.

~~Elimination of Undesirable Species~~

~~In order for mitigation wetland areas to become successfully established, nonnative plants which compete for light and space, must be controlled. The four most invasive undesirable species that must be removed are giant reed (*Arundo donax*), castor bean (*Ricinus communis*), pampas grass (*Cortaderia ata camensis*), and tamarisk (*Tamarix spp*.). These plants should be removed biannually during the five-year maintenance period. Once removed, the plants should be transported to a landfill for disposal.~~

~~The revegetation plan shall include a monitoring program to determine the success of the mitigation program and identify maintenance needs. The mitigation site shall be monitored periodically (at least once a year) to obtain information regarding the species and quantity of plants present and their growth. An annual report of the results of the monitoring effort shall be prepared and submitted to the City. The report shall address plant survival, vegetation cover, the success of establishing designated cover types, and recommended actions necessary to accomplish full mitigation.~~

~~City Review Procedures~~

~~The City Planning Department will review development proposals to determine conformity with the Wetlands Management Plan Project plans along with the revegetation plan shall be reviewed by the Environmental Quality Division to ensure that the project meets the requirements and objectives of the wetlands plan. In addition, the California Environmental Quality Act (CEQA) process will be used to assess the environmental consequences of development proposals and identify mitigation measures and alternatives to reduce impacts to wetlands.~~

~~ACKNOWLEDGEMENTS~~

~~The following individuals also participated in the preparation of this plan through the seven years of plan preparation and development. The Planning Department would like to specially acknowledge their participation and input.~~

~~City of San Diego Planning Department:~~

~~Maximillian Schmidt — Supervising Planner~~
~~James E. Fisk — Principal Planner~~
~~Douglas McHenry — Associate Planner~~
~~Linda Murray — Associate Planner~~
~~Susan Peerson — Junior Planner~~
~~Robert Scott — Associate Planner~~
~~William Roberts — Senior Planner~~
~~William Mackey — Associate Planner~~

~~City of San Diego Engineering and Development Department:~~

~~William Schempers, Jr. — Deputy Director~~
~~Robert Cain — Senior Engineer~~

~~City of San Diego Attorney's Office:~~

~~Frederick Conrad — Deputy City Attorney~~

~~Metropolitan Transit Development Board:~~

~~Thomas Larwin — Director~~
~~Eva Lerner-Lamb — Director of Planning and Operations~~
~~Robert Robenheimer — Senior Transportation Planner~~
~~Dave Schumacher — Assistant Transportation Planner~~

~~State of California Fish and Game Department~~

~~Michael Mulligan~~
~~Harold McKinnie~~

~~United States Fish and Wildlife Service Department:~~

~~Jack Fancher~~

~~State of California Transportation Department:~~

~~William Amon~~
~~Jon Rieger~~
~~Mark Moore~~

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APPENDIX G-A

RESOURCES OF THE SAN DIEGO RIVER

The wetland habitats of the San Diego River are utilized by a wide variety of migratory birds. More than 70 species have been observed and about half those species are dependent upon or prefer wetland habitats. The area is used by waterfowl such as ruddy duck, mallard, scaups, cinnamon teal, pintail; shore and wading birds such as egrets, herons, bitterns, coot, spotted sandpiper, sora, black-necked stilt, gallinule, dowitchers, and killdeer; diving birds such as double-crested cormorant, belted kingfisher, terns, and pied-billed grebe; perching birds such as swallows, black phoebe, ash-throated flycatcher, marsh wren, common yellowthroat, yellowthroat, yellow warbler, goldfinches, redwing blackbird, song sparrow, and Bullock's oriole; and raptors such as red-shouldered hawk, Cooper's hawk, black-shouldered kite and barn owl. Birds known or thought to breed in the San Diego River wetlands include: pied-billed grebe, mallard, cinnamon teal, ruddy duck, coot, sora, rough-winged swallow, long-billed marsh wren, yellowthroat and song sparrow. The least Bell's vireo, Vireobe/Hipusillis, which is a candidate for federal threatened or endangered status, has been observed in the Mission Valley reach of the San Diego River as recently as 1978 and willow thicket wetland habitat is considered its principal habitat.

About 28 species of amphibians or reptiles, such as bullfrog, Pacific tree frog, western toad, slender salamander, western pond turtle, soft shell turtle, side blotch lizard, alligator lizard, garter snake, rosy boa and long nose snake are expected to be found in the project vicinity. Small animals as well as other groups have not been inventoried in this reach of the river, but probably include raccoon, opossum, striped skunk, desert cottontail, many rodent species, long-tailed weasel and coyote.

The recreational fishery is apparently sustained by the presence of such species as black and yellow bullhead, channel catfish, green and redear sunfish, largemouth bass and black crappie. Other fish species of value as a forage base for predators would be threadfin shad, golden shiner, fathead minnow and mosquitofish.

Because the Fish and Wildlife Service considers these San Diego riparian wetland habitats to be of high value to public fish and wildlife resources and to be scarce and diminishing in extent (less than one percent of the county's area), they are ranked Resource Category 2, in accordance with the Mitigation Policy. The concomitant Mitigation Goal is: no net loss of in-kind habitat value.

Source: Fish and Wildlife Service.

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APPENDIX G-B

STATED GOALS OF FEDERAL AUTHORITIES BEARING ON PHYSICAL MANAGEMENT FLOODPLAINS

Clean Water Act

- Restore and maintain chemical, physical, and biological integrity of the nation's waters. (Sec. 101 (a))

- Eliminate discharge of pollutants into navigable waters by 1985. (Sec. 101 (a) (2))

- Protect and propagate fish, shellfish, and wildlife and provide recreation in and on the water (wherever attainable) by July 1, 1983. (Sec. 101(a)2))

- Adequately control sources of pollutants in each state through area-wide waste treatment management planning. (Sec. 101 (a) (5))

- Prohibit discharge of toxic pollutants in toxic amounts. (Sec. 101(1X3))

National Flood Insurance Act of 1968 and Federal Disaster Protection Act of 1973

- Ensure availability of flood insurance for residents of flood-prone areas through the means of a federal subsidy.

- Achieve local land use and control measures designed to guide the rational use of the floodplain as a condition for the availability of federally subsidized flood insurance.

- Substitute insurance to eventually replace federal disaster relief for flood occurrences, so that property owners will contribute to their own protection and be more fully indemnified (without having to repay a federal disaster loan) when flood loss occurs.

Coastal Zone Management Act of 1972

- Preserve, protect, develop, and where possible restore or enhance, the resources of the nation's coastal waters and the adjacent shorelands that are strongly influenced by each other, for this and succeeding generations. (Sec. 303(2))

- Reinforces Section 404 of the Federal Clean Water Act with specific policies for federal construction projects.

Wetlands Policy: U.S. Environmental Protection Agency

- Preserve the wetland ecosystems and protect them from destruction through waste water or non-point source discharges by treatment facilities, or by other physical, chemical or biological means.

PRESERVATION OF THE NATION'S WETLANDS
DEPARTMENT OF TRANSPORTATION

- Assure protection and preservation of wetlands to the fullest extent practicable during planning, construction and operation of federal transportation facilities, and federally assisted state and local transportation projects.

Executive Order 11988, "Floodplain Management"

- Requires federal agencies to revise their procedures for considering the impact that their actions may have on potential hazards from flooding.

- Where a practicable alternative exist, agencies should avoid activity in the floodplain.

- Avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and avoid direct or indirect support of floodplain development whenever there is a practicable alternative (for federal activities).

Source: Davis, David G., "Environmental Protection Agency Programs Relating to Riparian Ecosystems," in **Strategies for Protection and Management of Floodplain Wetlands and Other Ecosystems**, Proceedings of the Symposium, Callaway Gardens, Georgia, December 11-13, 1978.

- Encourage and assist the states to exercise their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and aesthetic values as well as needs for economic development. (Sec. 303(b))

- Encourage all federal agencies engaged in programs affecting the coastal zone to cooperate and participate with state and local governments and regional agencies in this effort. (Sec. 303(c))

- Encourage the participation of the public, of federal, state, and local governments and of the regional agencies in the develoment of coastal zone management programs. (Sec. 303 (d))

Fish and Wildlife Coordination Act

- Provide that wildlife conservation receives equal consideration and is coordinated with other features of water resource development programs through the effectual and harmonious planning development, maintenance and coordination of wildlife conservation and rehabilitation (Sec. 661).

Flood Control Act

- Preserve and protect established and potential uses of nation's rivers; provides aid to the consideration of projects on a basis of comprehensive and coordinated development; and limit the authorization and construction of navigation works unless they substantively benefit navigation and can be operated consistently with appropriate and economic use of the rivers by others.

Executive Order 11990, Protection of Wetlands

- Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands whenever there is a practicable alternative (in federal programs).

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APPENDIX G-C

U.S. FISH AND WILDLIFE SERVICE MITIGATION POLICY

I. PURPOSE

This document establishes policy for U.S. Fish and Wildlife Service recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, their habitats, and uses thereof. It will help to assure consistent and effective recommendations by outlining policy for the levels of mitigation needed and the various methods for accomplishing mitigation. It will allow federal action agencies and private developers to anticipate Service recommendations and plan for mitigation measures early, thus avoiding delays and assuring equal consideration of fish and wildlife resources with other project features and purposes. This policy provides guidance for Service personnel but variations appropriate to individual circumstances are permitted.

This policy supercedes the December 18, 1974, policy statement entitled "Position Paper of the Fish and Wildlife Service Relative to Losses to Fish and Wildlife Habitat Caused by Federally Planned or Constructed Water Resource Developments" and the Service River Basin Studies Manual Release 2.350 entitled "General Bureau Policy on River Basin Studies."

II. AUTHORITY

This policy is established in accordance with the following major authorities: (See **Appendix A** for other authorities.)

Fish and Wildlife Act of 1956 (16 U.S.C. 742(a)-754)

This Act authorizes the development and distribution of fish and wildlife information to the public. Congress and the President, and the development of policies and procedures that are necessary and desirable to carry out the laws relating to fish and wildlife including:

(1) "... take such steps as may be required for the development, advancement, management, conservation and protection of the fisheries resources;" and

(2) "... take such steps as may be required for the development, management, advancement, conservation, and protection of wildlife resources through research ... and other means."

Fish and Wildlife Coordination Act (16 U.S.C. 661-667(e)

This Act authorizes the U.S. Fish and Wildlife Service, National Marine Fisheries Service (NMFS), and state agencies responsible for fish and wildlife resources to investigate all proposed federal undertakings and non-federal actions needing a federal permit or license which impound, divert, deepen, or otherwise control or modify a stream or other body of water and to make mitigation and enhancement recommendations to the involved federal agency. "Recommendations ...shall be as specific as practicable with

respect to features recommended for wildlife conservation and development, lands to be utilized or acquired for such purposes, the results expected, and shall describe the damage to wildlife attributable to the project and the measures proposed for mitigating or compensating for these damages." In addition, the Act requires that wildlife conservation be coordinated with other features of water resource development programs.

Determinations under this authority for specific projects located in estuarine areas constitute compliance with the provisions of the Estuary Protection Act. (See **Appendix A.**)

Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1009)

This Act allows the Secretary of the Interior to make surveys, investigations, and "...prepare a report with recommendations concerning the conservation and development of wildlife resources..." on small watershed projects.

National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347)

This Act and its implementing regulations (40 CFR Part 1500-1508) requires that the U.S. Fish and Wildlife Service be notified of all major federal actions affecting fish and wildlife resources and their views and recommendations solicited. Upon completion of a draft Environmental Impact Statement, the Service is required to review it and make comments and recommendations, as appropriate. In addition, the Act provides that "the Congress authorizes and directs that, to the fullest extent possible ...all agencies of the Federal Government shall ...identify and develop methods and procedures ...which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making along with economic and technical considerations."

III. SCOPE

A. Coverage

This policy applies to all activities of the Service related to the evaluation of impacts of land and water developments and the subsequent recommendations to mitigate those adverse impacts except as specifically excluded below. This includes:

(1) investigations and recommendations for all actions requiring a federally issued permit or license that would impact waters of the U.S.;

(2) all major federal actions significantly affecting the quality of the human environment; and

(3) other federal actions for which the Service has legislative authority or executive direction for involvement including, but not limited to: coal, minerals, and outer continental shelf lease sales or federal approval of state permit programs for the control of discharges of dredged or fill material.

B. Exclusions

This policy does not apply to threatened or endangered species. The requirements for threatened and endangered species are covered in the Endangered Species Act of 1973 and accompanying regulations at 50 CFR Parts 17, 402, and 424. Under Section 7 of the Endangered Species Act, as amended, all federal agencies shall ensure that activities authorized, funded, or carried out by them are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Mitigating adverse impacts of a project would not in itself be viewed as satisfactory agency compliance with Section 7. Furthermore, it is clear to the Service that Congress considered the traditional concept of mitigation to be inappropriate for federal activities impacting listed species or their critical habitat.

This policy does not apply to Service recommendations for federal project completed or other projects permitted or licensed prior to enactment of Service authorities (unless indicated otherwise in a specific statute) or specifically exempted by them and not subject to reauthorization or renewal. It also does not apply where mitigation plans have already been agreed to by the Service, except where new activities or changes in current activities would result in new impacts or where new authorities, new scientific information, or developer failure to implement agreed upon recommendations make it necessary. Service personnel involved in land and water development investigations will make a judgment as to the applicability of the policy for mitigation plans under development and not yet agreed upon as of the date of final publication of this policy.

Finally, this policy does not apply to Service recommendations related to the enhancement of fish and wildlife resources. Recommendations for measures which improve fish and wildlife resources beyond that which would exist without the project and which cannot be used to satisfy the appropriate mitigation planning goal should be considered as enhancement measures. The Service strongly supports enhancement of fish and wildlife resources. The Service will recommend that all opportunities for fish and wildlife resource enhancement be thoroughly considered and included in project plans, to the extent practicable.

IV. DEFINITION OF MITIGATION

The President's Council on Environmental Quality defined the term “mitigation” in the National Environmental Policy Act regulations to include: “(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.” (40 CFR Part 1508.20 (a-e)).

The Service supports and adopts this definition of mitigation and considers the specific elements to represent the desirable sequence of steps in the mitigation planning process. (See **Appendix B** for definitions of other important terms necessary to understand this policy.)

V. MITIGATION POLICY OF THE U.S. FISH AND GAME WILDLIFE SERVICE

The overall goals and objectives of the Service are outlined in the Service Management Plan and an accompanying Important Resource Problems document which describes specific fish and wildlife problems of importance for planning purposes. Goals and objectives for Service activities related to land and water development are contained in the Habitat Preservation Program Management Document. The mitigation policy was designed to stand on its own; however, these documents will be consulted by Service personnel to provide the proper perspective for the Service mitigation policy. They are available upon request from the Director, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

A. General Policy

The mission of the U.S. Fish and Wildlife Service is to:

Provide the federal leadership to conserve, protect and enhance fish and wildlife and their habitats for the continuing benefit of the people.

The goal of Service activities oriented toward land and water development responds to congressional direction that fish and wildlife resource conservation receive equal consideration and be coordinated with other features of federal resource development and regulatory programs through effective and harmonious planning, development, maintenance and coordination of fish and wildlife resource conservation and rehabilitation in the United States, its territories and possessions. The goal is to:

Provide the federal leadership to conserve, protect and enhance fish and wildlife and their habitats and facilitate balanced development of this nation's natural resources by timely and effective provision of fish and wildlife information and recommendations.

Fish and wildlife and their habitats are public resources with clear commercial, recreational, social, and ecological value to the nation. They are conserved and managed for the people by state, federal, and Indian tribal governments. If land or water developments are proposed which may reduce or eliminate the public the public benefits that are provided by such natural resources, then state and federal resource agencies have a responsibility to recommend means and measures to mitigate such losses. Accordingly:

In the interest of serving the public, it is the policy of the U.S. Fish and Wildlife Service to seek to mitigate losses of fish, wildlife, their habitats, and uses thereof from land and water developments.

In administering this policy, the Service will strive to provide information and recommendations that fully support the nation's need for fish and wildlife resource conservation as well as sound economic and social development through balanced multiple uses of the nation's natural resources. The Service will actively seek to facilitate needed development and avoid conflicts and delays through early involvement in land and water development planning activities in advance of proposals for specific projects or during the early planning and design stage of specific projects.

This should include early identification of resource areas containing high and low habitat values for important species and the development of ecological design information that outlines specific practicable means and measures for avoiding or minimizing impacts. The former can be used only by developers to site projects in the least valuable areas. This could possibly lower total project costs to development interests. These actions are part of good planning and are in the best public interest.

The early provision of information to private and public agencies in a form which enables them to avoid or minimize fish and wildlife losses as a part of initial project design is the preferred form of fish and wildlife conservation.

B. U.S. Fish and Wildlife Service Mitigation Planning Goals by Resource Category

The planning goals and guidelines that follow will be used to guide Service recommendations on mitigation of project impacts. Four resource categories are used to indicate that the level of mitigation recommended will be consistent with the fish and wildlife resource values involved.

The policy covers impacts to fish and wildlife populations, their habitat and the human uses thereof. However, the primary focus in terms of specific guidance is on recommendations related to habitat value losses. In many cases, compensation of habitat value losses should result in replacement of fish and wildlife populations and human uses. But where it does not, the Service will recommend appropriate additional means and measures.

Resource Category 1

a. Designation Criteria

Habitat to be impacted is of high value for evaluation species and is unique and irreplaceable on a national basis or in the ecoregion section.

b. Mitigation Goal

No Loss of Existing Habitat Value.

c. Guideline

The Service will recommend that all losses of existing habitat be prevented as these one-of-a-kind areas cannot be replaced. Insignificant changes that do not result in adverse impacts on habitat value may be acceptable provided they will have no significant cumulative impact.

Resource Category 2

a. Designation Criteria

Habitat to be impacted is of high value for evaluation species and is relatively scarce or becoming scarce on a national basis or in the ecoregion section.

b. Mitigation Goal

No Net Loss of In-Kind Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or reduce or eliminate them over time. If losses remain likely to occur, then the Service will recommend that those losses be compensated by replacement of the same kind of habitat value so that the total loss of such in-kind habitat value will be eliminated.

Specific ways to achieve this planning goal include:

(1) physical modification of replacement habitat to convert it to the same type lost;

(2) restoration or rehabilitation of previously altered habitat;

(3) increased management of similar replacement habitat so that the in-kind value of the lost habitat is replaced, or

(4) a combination of these measures.

By replacing habitat value losses with similar habitat values, populations of species associated with the habitat may remain relatively stable in the area over time. This is generally referred to as in-kind replacement.

Exceptions

An exception can be made to this planning goal when:

(1) different habitats and species available for replacement are determined to be of greater value than those lost, or

(2) in-kind replacement is not physically or biologically attainable in the ecoregion section.

In either case, replacement involving different habitat kinds may be recommended provided that the total value of the habitat lost is recommended for replacement (see the guideline for Category 3 mitigation below).

Resource Category 3

a. Designation Criteria

Habitat to be impacted is of high to medium value for evaluation species and is relatively abundant on a national basis.

b. Mitigation Goal

No Net Loss of Habitat Value While Minimizing Loss of In-Kind Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or reduce or eliminate them over time. If losses remain likely to occur, then the Service will recommend that those losses be compensated by replacement of habitat value will be eliminated.

It is preferable, in most cases, to recommend ways to replace such habitat value losses in-kind. However, if the Service Determines that in-kind replacement is not desirable or possible, then other specific ways to achieve this planning goal include:

(1) substituting different kinds of habitats, or

(2) increasing management of different replacement habitats so that the value of the lost habitat is replaced.

By replacing habitat value losses with different habitats or increasing management of different habitats, populations of species will be different, depending on the ecological attributes of the replacement habitat. This will result in no net loss of total habitat value, but may result in significant differences in fish and wildlife populations. This is generally referred to as out-of-kind replacement.

Resource Category 4

a. Designation Criteria

Habitat to be impacted is of medium to low value for evaluation species.

b. Mitigation Goal

Minimize Loss of Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or to reduce or eliminate them over time. If losses remain likely to occur, then the Service may make a recommendation for compensation, depending on the significance of the potential loss.

However, because these areas possess relatively low habitat values, they will likely exhibit the greatest potential for significant habitat value improvements. Service personnel will fully investigate these areas' potential for improvement, since they could be used to mitigate Resource Category 2 and 3 losses.

C. Mitigation Planning Policies

1. State-Federal Partnership

a. The U.S. Fish and Wildlife Service will fully coordinate activities with those state agencies responsible for fish and wildlife resources, the National Marine Fisheries Service (NMFS) and the Environmental Protection Agency (EPA) related to the investigation of project proposals and development of mitigation recommendations for resources of concern to the state, NMFS or EPA.

b. Service personnel will place special emphasis on working with State agencies responsible for fish and wildlife resources. NMFS and EPA to develop compatible approaches and to avoid duplication of efforts.

2. Resource Category Determinations

a. The Service will make resource category determinations as part of the mitigation planning process. Such determinations will be made early in the planning process and transmitted to the federal action agency of private developer to aid them in their project planning, to the extent practicable.

b. Resource Category determinations will be made through consultation and coordination with state agencies responsible for fish and wildlife resources and other federal resource agencies, particularly the NMFS and the EPA, whenever resources of concern to those groups are involved. Where other elements of the public, including development groups, have information that can assist in making such determinations, the Service will welcome such information.

c. All Resource Category determinations will contain a technical rationale consistent with the designation criteria. The rationale will:

(1) outline the reasons why the evaluation species were selected;

(2) discuss the value of the habitat to the evaluation species; and

(3) discuss and contrast the relative scarcity of the fish and wildlife resources on a national and ecoregion section basis.

Note: If the State agency responsible for fish and wildlife resources wishes to outline scarcity on a more local basis, U.S. Fish and Wildlife Service personnel should assist in developing such rationale, whenever practicable.

d. When funding, personnel, and available information make it practicable, specific geographic areas or, alternatively, specific habitat types that comprise a given resource category should be designated in advance of development. Priority for pre-designation will be placed on those areas that are of high value for evaluation species and are subject to development pressure in the near future. Such pre-designations can be used by developers or regulators to determine the least valuable areas for use in project planning and siting considerations.

e. The following examples should be given special consideration as either Resource Category 1 or 2:

(1) Certain habitats within Service-identified Important Resource Problem (IRP) areas. Those IRPs dealing with threatened or endangered species are not covered by this policy. (See **Scope**)

(2) Special aquatic and terrestrial sites including legally designated or set-aside areas such as sanctuaries, fish and wildlife management areas, hatcheries, and refuges, and other aquatic sites such as floodplains, wetlands, mudflats, vegetated shallows, coral reefs, riffles and pools, and springs and seeps.

3. Impact Assessment Principles

a. Changes in fish and wildlife productivity or ecosystem structure and function may not result in a biologically adverse impact. The determination as to whether a biological change constitutes an adverse impact for which mitigation should be recommended is the responsibility of the Service and other federal and state resource agencies.

b. The net biological impact of a development proposal (or alternative) is the difference in predicted biological conditions between the future with the action and the future without the action. If the future without the action cannot be reasonably predicted and documented by the project sponsor, then the Service analysis should be based on biological conditions that would be expected to exist over the planning period due to natural species succession or implementation of approved restoration/improvement plans or conditions which currently exist in the planning area.

c. Service review of project impacts will consider, whenever practicable:

(1) The total long-term biological impact of the project, including any secondary or indirect impacts regardless of location; and

(2) any cumulative effects when viewed in the context of existing or anticipated projects.

d. The habitat evaluation procedures will be used by the Service as a basic tool for evaluating project impacts and as a basis for formulating subsequent recommendations for mitigation subject to the exemptions in the Ecological Services Manual (100 ESM 1). When the habitat evaluation procedures do not apply, then other evaluation systems may be used provided such use conforms with policies provided herein.

e. In those cases where in-stream flows are an important determinant of habitat value, consideration should be given to the use of the Service's in-stream Flow Incremental Methodology to develop in-stream flow mitigation recommendations, where appropriate.

f. Where specific impact evaluation methods or mitigation technologies are not available, Service employees shall continue to apply their best professional judgment to develop mitigation recommendations.

4. Mitigation Recommendations

a. The Service may recommend support of projects or other proposals when the following criteria are met:

(1) They are ecologically sound;

(2) The least environmentally damaging reasonable alternative is selected;

(3) Every reasonable effort is made to avoid or minimize damage or loss of fish and wildlife resources and uses;

(4) All important recommended means and measures have been adopted with guaranteed implementation to satisfactorily compensate for unavoidable damage or loss consistent with the appropriate mitigation goal; and

(5) For wetlands and shallow water habitats, the proposed activity is clearly water-dependent and there is a demonstrated public need.

The Service may recommend the "no project" alternative for those projects or other proposals that do not meet all of the above criteria and where there is likely to be a significant fish and wildlife resource loss.

b. Recommendations will be presented by the Service at the earliest possible stage of project planning to assure maximum consideration. The Service will strive to provide mitigation recommendations that represent the best judgment of the Service, including consideration of cost, on the most effective means and measures of satisfactorily achieving the mitigation planning goal. Such recommendations will be developed in cooperation with the federal action agency or private developer responsible for the project, whenever practicable, and will play heave reliance on cost estimates provided by that federal action agency or private developer.

c. The Service will recommend that the federal action agency include designated funds for all fish and wildlife resource mitigation (including, but not limited to Service investigation costs, initial development costs and continuing operations, maintenance, replacement, and administrative costs) as part of the initial and any alternative project plans and that mitigation funds (as authorized and appropriated by congress for federal projects) be spent concurrently and proportionately with overall project construction and operation funds throughout the life of the project.

Note: Prevention of losses may necessitate expenditure of funds at an earlier stage of project planning. This is acceptable and preferred.

d. Service mitigation recommendations will be made under an explicit expectation that these means and measures:

(1) would be the ultimate responsibility of the appropriate federal action agency implement or enforce; and

(2) would provide for a duration of effectiveness for the life of the project plus such additional time required for the adverse effects of an abandoned project to cease to occur.

e. Land acquisition in fee title for the purpose of compensation will be recommended by the Service only under one or more of the following three conditions:

(1) When a change in ownership is necessary to guarantee the future conservation of the fish and wildlife resource consistent with the mitigation goal for the specific project area; or

(2) When other means and measures for mitigation (see **Section 5** below) will not compensate habitat losses consistent with the mitigation goal for the specific project area; or

(3) When land acquisition in fee title is the most cost-effective means that may partially or completely achieve the mitigation goal for the specific project area.

Service recommendations for fee title land acquisition will seek to identify mitigation lands with marginal economic potential.

f. First priority will be given to recommendations of a mitigation site within the planning area. Second priority will be given to recommendation of a mitigation site in proximity to the planning area within the same ecoregion section. Third priority will be given to recommendation of a mitigation site elsewhere within the same ecoregion section.

g. Service personnel will fully support a variety of uses on mitigation lands where such uses are compatible with dominant fish and wildlife refuges, are consistent with the provisions of the Refuge Recreation Act and the National Wildlife Refuge Administration Act. However, it may be in the best public interest to recommend limiting certain uses that would significantly decrease habitat value for species of high public interest. In such cases, the Service may recommend against such incompatible uses.

h. Measures to increase recreation values will not be recommended by Service personnel to compensate for losses of habitat value. Recreation use losses not restored through habitat value mitigation will be addressed through separate and distinct recommended measures to offset those specific losses.

i. The guidelines contained in this policy do not apply to threatened or endangered species. However, where both habitat and endangered or threatened species impacts are involved, Service personnel shall fully coordinate environment efforts with endangered species efforts to provide timely, consistent, and unified recommendations for resolution of fish and wildlife impacts, to the extent possible. More specifically, environment and endangered species personnel shall coordinate all related activities dealing with investigations of land and water developments. This includes full use of all provisions that can expedite Service achievement of "one-stop shopping," including coordinated early planning involvement, shared permit review activities, consolidated permit reporting, and consolidated flow of pre-project information to developers, consistent with legislative mandates and deadlines.

j. The Service will place high priority on and continue to develop and implement procedures for reducing delays and conflicts in permit related activities. Such procedures will include, but not be limited to:

(1) Joint processing of permits.

(2) Resource mapping.

(3) Early provision of ecological design information.

(4) Involvement in Special Area Management Planning.

k. The Service will encourage predevelopment compensation actions by federal action agencies which can be used to offset future unavoidable losses for lands or waters not adequately protected by an existing law, policy, or program.

Banking of habitat value for the express purpose of compensation for unavoidable future losses will be considered to be a mitigation measure and not an enhancement measure. Withdrawals from the mitigation "bank" to offset future unavoidable losses will be based on habitat value replacement, not acreage or cost for land purchase and management.

5. Mitigation Means and Measures

Mitigation recommendations can include, but are not limited to, the types of actions presented below. These means and measures are presented in the general order and priority in which they should be recommended by Service personnel with the exception of the "no project" alternative. (See **Section 4(a)**).

a. Avoid the impact

(1) Design project to avoid damage of loss of fish and wildlife resources including management practices such as timing of activities or structural features such as multiple outlets, passage or avoidance structures and water pollution control facilities.

(2) Use of nonstructural alternative to proposed project.

(3) No project.

b. Minimize the impact

(1) Include conservation of fish and wildlife as an authorized purpose of federal projects.

(2) Locate at the least environmentally damaging site.

(3) Reduce the size of the project.

(4) Schedule timing and control of initial construction operations and subsequent operation and maintenance to minimize disruption of biological community structure and function.

(5) Selective tree clearing or other habitat manipulation.

(6) Control water pollution through best management practices.

(7) Time and control flow diversions and releases.

(8) Maintain public access.

(9) Control public access for recreational or commercial purposes.

(10) Control domestic livestock use.

c. Rectify the impact

(1) Regrade disturbed areas to contours which provide optimal fish and wildlife habitat or approximate original contours.

(2) (2) Seed, fertilize and treat areas as necessary to restore fish and wildlife resources.

(3) Plant shrubs and trees and other vegetation to speed recovery.

(4) Control polluted spoil areas.

(5) Restock fish and wildlife resources in repaired areas. Fish stocking or introductions will be consistent with the Service Fish Health Policy (January 3, 1978).

d. Reduce or eliminate the impact over time

(1) Provide periodic monitoring of mitigation features to assure continuous operation.

(2) Assure proper training of project personnel in the operations of the facility to preserve existing of restored fish and wildlife resources at project sites.

(3) Maintain or replace equipment or structures so that future loss of fish and wildlife resources due to equipment or structure failure does not occur.

e. Compensate for impacts

(1) Conduct wildlife management activities to increase habitat values of existing areas, with project lands and nearby public lands receiving priority.

(2) Conduct habitat construction activities to fully restore or rehabilitate previously altered habitat or modify existing habitat suited to evaluation species for the purpose of completely offsetting habitat value losses.

(3) Build fishery propagation facilities.

(4) Arrange legislative set-aside or protective designation for public lands.

(5) Provide buffer zones.

(6) Lease habitat.

(7) Acquire wildlife easements.

(8) Acquire water rights.

(9) Acquire land in fee title.

6. Follow-up

The Service encourages, supports, and will initiate, whenever practicable, post-project evaluations to determine the effectiveness of recommendations in achieving the mitigation planning goal. The Service will initiate additional follow-up studies when funds are provided by the federal action agency.

In those instances where Service personnel determine that federal agencies or private developers have not carried out those agreed upon mitigation means and measures, then the Service will request the responsible federal action agency to initiate corrective action.

APPENDIX A

OTHER AUTHORITIES AND DIRECTION FOR SERVICE MITIGATION RECOMMENDATIONS

Legislative

Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et sq.). The 1977 amendments require the Fish and Wildlife Service "...upon request of the Governor of a State, and without reimbursement, to provide technical assistance to such State in developing a Statewide (water quality planning) program and in implementing such program after its approval." In addition, this Act requires the Service to comment on proposed state permit programs for the control of discharges of dredged or fill material and to comment on all federal permits within 90 days of receipt.

Federal Power Act of 1920. as amended (16 U.S.C. 791 (a), 803, 811). This Act authorizes the Secretary of the Interior to impose conditions on licenses issued for hydroelectric projects within specific withdrawn public lands. The Secretary is given specific authority to prescribe fishways to be constructed, maintained, and operated at the licensee's expense.

Estuary Protection Act (16 U.S.C. 1221-1226). This Act requires the Secretary of the Interior to review all project plans and reports for land and water resource development affecting estuaries and to make recommendations for conservation, protection, and enhancement.

*Coastal Zone Management Act of 1972*C\6\J.S.C. 1451-1464). This Act requires the Secretary of Commerce to obtain the views of federal agencies affected by the program, including the Department of the Interior, and to ensure that these views have been given adequate consideration before approval of Coastal Zone Management Plans. The Service provides the Department's views about fish and wildlife resources. Pursuant to the Coastal Zone Management Act Amendments of 1980 (Pub. L. 96-464) the Department of Interior provides comments on federal grants to help states protect and preserve coastal areas because of their "…conservational, recreational, ecological or aesthetic values." The 1980 amendments also authorize the Department of Interior to enter into Special Area Management Planning to "…provide for increased specificity in protecting natural resources, reasonable coast dependent economic growth... and improved decision making."

Water Bank Act (16 U.S.C. 1301-1311). This Act requires that the Secretary of Agriculture "…shall consult with the Secretary of Interior and take appropriate measures to ensure that the program carried out... is in harmony with wetlands programs administered by the Secretary of the Interior."

Wild and Scenic Rivers Act (16 U.S.C. 1271-1287). This Act requires the Secretary of the Interior to comment on such proposals. The Fish and Wildlife Service provides the Department's views with regard to fish and wildlife resources.

Geothermal Steam Act of 1970 (30 U.S.C. 1001-1025). This Act requires that the Fish and Wildlife Service recommend to the Secretary those lands that shall not be leased for geothermal development by reason of their status as "…a fish hatchery administered by the Secretary, wildlife refuge, wildlife range, game range, wildlife management area, waterfowl production area, or for lands acquired or reserved for the protection and conservation of fish and wildlife that are threatened with extinction."

Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq. This Act requires the Department of the Interior to regulate surface mining and reclamation at existing and future mining areas. The Fish and Wildlife Service provides the Department with technical assistance regarding fish and wildlife aspects of Department programs on active and abandoned mine lands, including review of state regulatory submissions and mining plans, and comments on mining and reclamation plans.

Outer Continental Shelf Lands Act Amendments of 1978 (43 U.S.C. 1801). This Act requires the Secretary of the Interior to manage an environmentally sound oil and natural gas development program on the outer continental shelf. The Fish and Wildlife Service provides recommendations for the Department regarding potential ecological impacts before leasing in specific areas and contributes to environmental studies undertaken subsequent to leasing.

Mineral Leasing Act of 1920, as amended (30 U.S.C. 185). This Act authorizes the Secretary of the Interior to grant rights-of-way through federal lands for pipelines transporting oil, natural gas, synthetic liquids or gaseous fuels, or any other refined liquid fuel. Prior to granting a right-of-way for a project which may have a significant impact on the environment, the Secretary is required by this Act to request and review the applicant's plan for construction, operation, and rehabilitation of the right-of-way. Also, the Secretary is authorized to issue guidelines and impose stipulations for such projects which shall include, but not be limited to, "…requirements for restoration, revegetation and curtailment or erosion of surface land… requirements designed to control or prevent damage to the environment (including damage to fish and wildlife habitat); and …requirements to protect the interests of individuals living in the general area of the right-of-way or permit who rely on the fish, wildlife and biotic resources of the area for subsistence purposes."

Cooperative Unit Act (16 U.S.C. 753(a) 753(b)). This Act provides for cooperative programs for research and training between the Fish and Wildlife Service, the states and universities.

Airport and Airway Development Act (49 U.S.C. 1716). This Act requires the Secretary of Transportation to "…consult with the Secretary of the Interior with regard to the effect that any project... may have on natural resources including, but not limited to, fish and wildlife, natural, scenic and recreation assets, water and air quality, and other factors affecting the environment..."

Department of Transportation Act (49 U.S.C. 1653(f)). This Act makes it national policy that "…special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites…" and requires that the Secretary of Transportation "…cooperate and consult with the Secretary of the

Interior in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed." The Department of Transportation projects using unprotected lands cannot be approved unless there are no feasible and prudent alternatives to avoid such use and, if none, all possible measures to minimize harm have been considered.

Executive

President's Water Policy Message (June 6, 1978). This message directs the Secretary of the Interior to promulgate procedures for determination of measures to mitigate losses of fish and wildlife resources.

Water Resources Council's *Final Rules; Principles and Standards for Water and Related Land Resources Planning – Level C* (September 29, 1980). These rules reiterate the importance of participation in the development planning process by interested federal agencies, including the Department of the Interior. This participation includes review, coordination, or consultation required under various legislative and executive authorities. Under these rules, "Consideration is to be given to mitigation (as defined in 40 CFR 1508.20) of the adverse effects of each alternative plan. Appropriate mitigation is to be included where suitable as determined by the agency decision maker. Mitigation measures included are to be planned for at least concurrent and proportionate implementation with other major project features, except where such concurrent and proportionate mitigation is physically impossible. In the latter case, the reasons for deviation from this rule are to be presented in the planning report, and mitigation is to be planned for the earliest possible implementation. Mitigation for fish and wildlife and their habitat is to be planned in coordination with federal and state fish and wildlife agencies in accordance with the Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661-664) (sic)."

Executive Order 11990 – Protection of Wetlands (May 24, 1977). This Executive Order requires that each federal agency "…take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for; (1) acquiring, managing and disposing of Federal lands and facilities; and (2) providing federally undertaken, financed or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation and licensing activities." Relevant wetland concerns and values include, but are not limited to, maintenance of natural systems and long-term productivity of existing flora and fauna, habitat diversity, hydrological utility, fish, wildlife, timber and food. Under this Order, a developmental project in a wetland may proceed only if no practicable alternatives can be ascertained and if the proposal... includes all practicable measures to minimize harm to the wetland that may result from its use."

Executive Order 11988 – Floodplain Management (May 24, 1977). This Executive Order requires that federal agencies take floor plain management into account when formulating or valuating water or land use plans and that these concerns be reflected in the budgets, procedures, and regulations of the various agencies. This Order allows developmental

activities to proceed in floodplain areas only when the relevant agencies have "…considered alternatives to avoid adverse effects and incompatible development in the floodplains…" or when, in lieu of this, they have "…designed or modified their actions in order to minimize potential harm to or within the floodplain."

Executive Order 11967 – Exotic Organisms (May 24, 1977). This Executive Order requires that federal agencies shall restrict, to the extent permitted by law, the introduction of exotic species into the lands or waters which they own, lease, or hold for purposes of administration, and encourage the states, local governments, and private citizens to do the same. This Executive Order also requires federal agencies to restrict, to the extent permitted by law, the importation of exotic species and to restrict the use of federal funds and programs for such importation. The Secretary of the Interior, in consultation with the Secretary of Agriculture, is authorized to develop by rule or regulation a system to standardize and simplify the requirements and procedures appropriate for implementing this Order.

National/International Treaties

Federal Trust Responsibility to Indian Tribes. This responsibility is reflected in the numerous federal treaties with the Indian tribes. These treaties have the force of law. Protection of Indian hunting and fishing rights necessitates conservation of fish and wildlife and their habitat.

Convention Between the United States and Japan (September 19, 1974). This treaty endorses the establishment of sanctuaries and fixes preservation and enhancement of migratory bird habitat as a major goal of the signatories.

Convention Between the United States and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environments (November 8, 1978). This Treaty endorses the establishment of sanctuaries, refuges, and protected areas. It mandates reducing or eliminating damage to all migratory birds. Furthermore, it provides for designation of special areas for migratory bird feeding, wintering, feeding and molting, and commits the signatories to "…undertake measures necessary to protect the ecosystems in these areas... against pollution, detrimental alteration and other environmental degradation." Implementing legislation, Pub. L. 95-616, was passed in the United States in 1978.

Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (April 15, 1941). This treaty has several provisions requiring parties to conserve certain wildlife resources and their habitats.

Convention Between the United States and Great Britain (for Canada) for Protection of Migratory Birds (August 1, 1916, as amended January 30, 1979). This treaty provides for a uniform "…system of protection for certain species of birds which migrate between the United States and Canada, in order to assure the preservation of species either harmless or beneficial to man." The Treaty prohibits hunting insectivorous birds, but allows killing of birds under permit when injurious to agriculture. The 1979 amendment allows subsistence hunting of waterfowl outside of the normal hunting season.

APPENDIX B

OTHER DEFINITIONS

"*Compensation*," when used in the context of Service mitigation recommendations, means full replacement of project-induced losses to fish and wildlife resources, provided such full replacement has been judged by the Service to be consistent with the appropriate mitigation planning goal.

"*Ecoregion*" refers to a large biogeographical unit characterized by distinctive biotic and abiotic relationships. An ecoregion may be subclassified into domains, divisions, provinces, and sections. A technical explanation and map is provided in the "Ecoregions of the United States" by Robert G. Bailey, published by the U.S. Forest Service, 1976.

"*Ecosystem*" means all of the biotic elements (i.e., species, populations and communities) and abiotic elements (i.e., land, air, water, energy) interacting in a given geographical area so that a flow of energy leads to a clearly defined trophic structure, biotic diversity and material cycles. (Eugene P. Odum. 1971. *Fundamentals of Ecology*)

"*Evaluation species*" means those fish and wildlife resources in the planning area that are selected for impact analysis. They must currently be present or known to occur in the planning area during at least one stage of their life history except where species not present (1) have been identified in fish and wildlife restoration or improvement plans approved by state or federal resource agencies, or (2) will result from natural species succession over the life of the life of the project. In these cases, the analysis may include such identified species not currently in the planning area.

There are two basic approaches to the selection of evaluation species: (1) selection of species with high public interest, economic value or both; and (2) selection of species to provide a broader ecological perspective of an area. The choice of one approach in lieu of the other may result in a completely different outcome in the analysis of a proposed land or water development. Therefore, the objectives of the study should be clearly defined before species selection is initiated. If the objectives of a study are to base a decision on potential impacts to an entire ecological community, such as a unique wetland, then a more ecologically based approach is desirable. If, however, a land or water use decision is to be based on potential impacts to a public use area, then species selection should favor animals with significant human use values. In actual practice, species should be selected to represent social, economic and broad ecological views because mitigation planning efforts incorporate objectives that have social, economic, and ecological aspects. Species selection always should be approached in a manner that will optimize contributions to the stated objectives of the mitigation planning effort.

- Most land and water development decisions are strongly influenced by the perceived impacts of the proposed action on human use. Since economically or socially important species have clearly defined linkages to human use, they should be included as evaluation species in all appropriate land and water studies. As a guideline, the following types of

species should be considered:

- Species that are associated with Important Resource Problems as designated by the Director of the Fish and Wildlife Service (except for threatened or endangered species).

- Other species with monetary and non-monetary benefits to people accruing from consumptive and non-consumptive human uses including, but not limited to, fishing, hunting, bird watching and educational, aesthetic, scientific or subsistence uses.

An analysis based only on those species with directly identifiable economic or social value may not be broad enough to adequately describe all of the ramifications of a land and water use proposal. If it is desirable to increase the ecological perspective of an assessment, the following types of species should be considered:

- Species known to be sensitive to specific land and water use actions. The species selected with this approach serve as "early warning" or indicator species for the affected fish and wildlife community.

- Species that perform a key role in a community because of their role in nutrient cycling or energy flows. These species also serve as indicators for a large segment of the fish and wildlife community, but may be difficult to identify.

- Species that represent groups of species which utilize a common environmental resource (guilds). A representative species is selected from each guild and predicted environmental impacts for the selected species are extended with some degree of confidence to other guild members.

"*Federal action agency*" means a department, agency or instrumentality of the United States which plans, constructs, operates or maintains a project, or which plans for or approves a permit, lease, or license for projects or manages Federal lands.

"Fish and wildlife resources" means birds, fishes, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

"Habitat" means the area which provides direct support for a given species, population, or community. It includes all environmental features that comprise an area such as air quality, water quality, vegetation and soil characteristics and water supply (including both surface and groundwater).

"Habitat value" means the suitability of an area to support a given evaluation species.

"Important Resource Problem" means a clearly defined problem with a single important population of a community of similar species in a given geographic area as defined by the Director of the Fish and Wildlife Service.

"In-kind replacement" means providing or managing substitute resources to replace the habitat value of the resources lost, where such substitute resources are physically and biologically the same or closely approximate those lost.

~~"*Loss*" means a change in fish and wildlife resources due to human activities that is considered adverse and;~~

~~(1) reduces the biological value of that habitat for evaluation species;~~

~~(2) reduces population numbers of evaluation species;~~

~~(3) increases population numbers of "nuisance" species;~~

~~(4) reduces the human use of those fish and wildlife resources; or~~

~~(5) disrupts ecosystem structure and function.~~

~~Changes that improve the value of existing habitat for evaluation species are not to be considered losses, i.e., burning or selective tree harvesting for wildlife management purposes. In addition, reductions in animal populations for the purpose of harvest or fish and wildlife management will not be considered as losses for the purpose of this policy.~~

~~"*Minimize*" means to reduce to the smallest practicable amount or degree.~~

~~"*Mitigation banking*" means habitat protection or improvement actions taken expressly for the purpose of compensating for unavoidable losses from specific future development actions. It only includes those actions above and beyond those typically taken by congress for protection of fish and wildlife resources.~~

~~"*Out-of-kind replacement*" means providing or managing substitute resources to replace the habitat value of the resources lost, where such substitute resources are physically or biologically different from those lost.~~

~~"*Planning area*" means a geographic space with an identified boundary that includes:~~

~~(1) The area identified in the study's authorizing document;~~

~~(2) The locations of resources included in the study's identified problems and opportunities;~~

~~(3) The locations of alternative plans, often called "project areas;" and~~

~~(4) The locations of resources that would be directly, indirectly, or cumulatively affected by alternative plans, often called the "affected area,"~~

~~"*Practicable*" means capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as environment, cost, or technology.~~

~~"*Project*" means any action, planning or approval process relating to an action that will directly or indirectly affect fish or wildlife resources.~~

"Replacement" means the substitution of offsetting of fish and wildlife resource losses with resources considered to be of equivalent biological value. However, resources used for replacement represent loss or modification of another type of habitat value. Replacement actions will result in a loss of habitat acreage and types which will continually diminish the overall national resource base. It should be clearly understood that replacement actions never restore the lost fish and wildlife resource — that is lost forever.

Dated: January 13, 1981.
Cecil Andrus,
Secretary of the Department of the Interior.

(FR Doc. 81 — 1895 Filed 1 -22 -81; 8:45 am)

~~APPENDIX G-D~~

~~SUGGESTED PLANT MATERIALS FOR USE IN REVEGETATION~~

~~Trees for Riparian Woodland~~

~~Common Name~~	~~Scientific Name~~
~~Western sycamore~~	~~*Platanus racemose*~~
~~Fremont cottonwood~~	~~*Populus fremontii*~~
~~Coast live oak~~	~~*Quercus agrifolia*~~
~~Black willow~~	~~*Salix gooddingii**~~
~~Sandbar willow~~	~~*Salix hindsiana*~~
~~Red willow~~	~~*Salix laevigata**~~
~~Yellow willow~~	~~*Salix lasiandra**~~
~~Arroyo willow~~	~~*Salix lasiolepis*~~
~~Elderberry~~	~~*Sambucus mexicana*~~

~~Shrubs for Riparian Woodland~~

~~Common Name~~	~~Scientific Name~~
~~California mugwart~~	~~*Artemisia douglasiana* (s)*~~
~~Palmer's sagebrush~~	~~*Artemisia palmeri* (s)*~~
~~Mulefat~~	~~*Baccharis glutinosa (s)*~~
~~Broom Baccharis~~	~~*Baccharis sarathroides*~~
~~Bladderpod~~	~~*Isomeris arborea*~~
~~Fuchsia-flowered Gooseberry~~	~~*Ribes speciosum*~~
~~Wild rose~~	~~*Rosa californica*~~
~~California blackberry~~	~~*Rubus ursinus**~~
~~Sandbar willow~~	~~*Salix hindsiana*~~
~~Wild grape~~	~~*Vitis girdiana**~~

Shrubs for Buffer

Common Name	Scientific Name
Saltbrush	*Atriplix lentiformis (s)*
Coyote bush	*Baccharis pilularis (s) var. consanguinea*
Summer holly	*Comarostaphylis diversifolia*
Wild rye	*Elymus condensatus (s)*
Goldenbush	*Haplopappus squarrosus (s)*
Toyon	*Heteromeles arbutifolia*
Honeysuckle	*Lonicera subspicata**
Bushmallow	*Rhamnus crocea*
Monkeyflower	*Malocathamnus fasciculatus (s)*
Beard tongue	*Mimulus puniceus (s)*
Holly-leaved cherry	*Penstemon spectabilis (s)*
Redberry	*Prunus ilicifolia*
Lemonadeberry	*Quercus dumosa*
Sugar bush	*Rhus integrifolia*
Elderberry	*Rhus ovata*
Spanish dagger	*Sambucus mexicana*

Annuals and Herbaceous Perrenials for Riparian Woodland and Buffer

Common Name	Scientific Name
Primrose	*Camissonia cherianthfolia esp. suffruticosa**
Doveweed	*Eremocarpus setigerus*
Buckwheat	*Eriogonum parvifolium (s)*
California poppy	*Eschscholzia californica (s)*
Sunflower	*Helianthus annuus (s)*
Deerweed	*Lotos scoparius (s)*
Lupine	*Lupinus bicolor (s)*
Lupine	*Lupinus succulentus (s)*
Baby blue-eyes	*Nemophila menziesii (s)*
Evening primrose	*Oenothera hookeris (s)*
Phacelia	*Phacelia tanacetifolia (s)*
Plantain	*Plantago insularis (s)*
Blue-eyed grass	*Sisyrinchium bellum (s)*

~~APPENDIX G-E~~

~~LIST OF AGENCIES FOR CONSULTATION~~

~~**Department of the Army**~~
~~Los Angeles District Corps of Engineers~~
~~Regulatory Branch~~
~~P.O. Box 2711~~
~~Los Angeles, CA 90053~~
~~(213) 688-5606~~

~~**Department of Fish and Game**~~
~~245 West Broadway, Suite 350~~
~~Long Beach, CA 90802~~

~~**U.S. Fish and Wildlife Service**~~
~~Division of Ecological Services~~
~~24000 Avila Road~~
~~Laguna Niguel, CA 92677~~
~~(714) 831-4270~~

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APPENDIX ~~H~~ G

CONCEPT 8 – PLANNING COMMITTEE ALTERNATIVE

Concept 8. Planning Committee Alternative: Multiple Use - Integrated Use Emphasis

(This alternative was prepared by the Mission Valley Unified Planning Committee. The alternative is included as submitted by the Planning Committee. For additional detailed information see **Appendix ~~H~~** G.)

Overall Goal

To provide a community plan for Mission Valley which allows for its continued development (through market initiative) as a quality regional urban center in the City of San Diego while recognizing environmental concerns, the Valley's traffic needs and encouraging the Valley's development as a community.

Concept 8 is based on a realistic, and implementable land use proposal, as determined by the Mission Valley Unified Planning Committee. The land uses were those recommended by the property owners and local development interests. A strong multiple use component is proposed for large undeveloped tracts of land along Friars Road. The transportation plan has been developed based upon these land use assumption.

The open space element is the key, not only to open space recommendations, but urban design recommendations as well. Urban design focuses on the river, hillsides, and transportation corridors. The open space element discusses development criteria for the flood control facility, hillsides and park and recreation areas.

Implementation envisions the developments of new zoning legislation to address development intensity and multiple use. A financing plan that envisions the establishment of assessment districts to provide funds for the development of public facilities within the community is included as part of the implementation plan.

The “Planning Committee Alternative - Integrated Use Emphasis” concept includes:
a) a multiple use approach to development; b) an emphasis on an integration of commercial-retail, commercial-recreation, office and residential uses; c) encouragement of residential development in order to complement the commercial and office development presently prevalent in Mission Valley; d) the addition of resident-oriented community facilities and services; e) a comprehensive transportation system with an emphasis on achieving a viable internal circulation network; and, f) a natural appearing, soft-bottomed floodway solution to flood protection, with optional augmentation by means of a supplemental diversion facility in order to contain a 100-year flood.

Concept 8 is an attempt to complement existing and future commercial office development with an appropriate amount of residential development.

This concept assumes the following: a) all developable and redevelopable property is to be designated “multiple use” unless the property owner elects to retain the existing zoning applicable to the property; b) existing CA, CO, and CR zoning remain on developed properties at the option of the property owners; c) all future development intensity is regulated by a maximum floor area ratio of 2.

This development intensity approach is intended to equitably distribute future land use intensification in Mission Valley. The “multiple use” designation permits any of four land uses (office, retail, hotel, residential) either singly or in some combination.

The Concept 8 approach to development intensity would regulate intensity by means of traditional zoning ordinances. The Committee has opted this approach as best adapted to achievement of the plan's goal: a multiple use approach to development with emphasis on an integration of commercial-retail, commercial-recreation, office and residential uses. The multiple use concept will, in itself, be effective in dealing with the Valley's traffic problems by reducing the traffic volumes which could be expected from comparably sized single use developments. Different land uses produce different traffic loads, particularly at peak hours, and multi-use will tend to minimize traffic congestion.

Mission Valley is characterized by an abundance of regionally oriented shopping, office and recreational facilities, but lacks resident-oriented support facilities despite considerable residential growth. It is felt that a moderate amount of residential growth under this concept would justify providing such local support facilities as supermarkets and other neighborhood retail and service facilities, medical clinics, etc.

A balanced transportation system is an essential ingredient of Concept 8 with an emphasis on achieving a viable internal circulation network.

Public transit modes would be supplemented by an extensive walkway and bikeway system linking many of the Valley's major activity centers. This concept also requires a significantly upgraded surface street system in order to reduce, or eliminate entirely, current reliance upon use of the freeway system to travel within the Valley. Although a light rail transit (LRT) line is not an integral part of Concept 8 at this time, one could ultimately be of significant benefit to Mission Valley. The future extension of an LRT line from Centre City through Mission Valley to the stadium (and possibly north along I-15 to the city of Escondido) could reduce dependence upon the automobile and reduce traffic congestion and parking problems in the Valley.

Concept 8 embodies a natural-appearing, soft-bottomed floodway approach to flood protection, with optional augmentation by means of a supplemental diversion facility, with the combined objectives of providing a major flood control facility to contain the 100-year frequency flood in a visually attractive setting, while also making more land available for development than is presently the case.

The overall appearance of this flood protection system would be similar to that of a river greenbelt with water year-round in the low-flood channel and preservation of much of the

existing riparian/wetland habitat. The river corridor itself could be conceivably designed to accommodate a variety of uses which would complement the abutting land uses and provide flood control protection and habitat conservation.

Concept 8 - Transportation Design Criteria and Environmental Criteria

The design of a balanced transportation system which implements the planning principles underlying the development of Mission Valley requires reevaluating present transportation practices to achieve better integration of the transportation facility design with other land use elements of the community.

For planning purposes, design of the transportation system is conceptualized two ways: first, as a flow of people and goods linking specific centers of activity; and second, as a physical structure occupying horizontal and vertical space. The physical shape of facilities should complement the adjoining communities. The use of standardized rigid physical design concepts should be avoided short of demonstrable safety or hazard problems.

In terms of the regional street and highway network, the plan assumes that SR-52 will be completed east to SR-67; construction of I-15 will be finished north of I-8; and SR-125 will be constructed between I-8 and SR-56 in Poway. New streets and improved facilities are also contemplated, as indicated on the maps included in the plan. Despite these improvements, some areas of the implementing will experience congestion during peak periods. This projected level of congestion is considered acceptable near freeway interchanges.

Concept 8 - Public Transit

The long-term development of Mission Valley as a vital regional employment and residential community may be severely impacted by total reliance on the automobile. In order to accommodate projected development it is essential that public transit corridors and stations be provided. Use of public transit (alternative transportation systems) could go a long way in preserving the vitality of Mission Valley. Through cooperation among the various private interests, and working together with government, a new transportation system could be developed that would ensure the long term viability of Mission Valley as a major hub of the San Diego Region.

Concept 8 - Light Rail Transit

A desirable element of the long-term transportation solution for Mission Valley is the extension of the regional LRT system. The LRT may provide an alternative method of moving commuters through the Valley. An extension could include a line running from downtown, through the Valley to either the east county area (via Mission Gorge/I-8) or north to Escondido (via I-15). Preliminary studies indicate that ridership in the Valley could be relatively high.

Concept 8 - Land Use

Objectives

- Encourage multiple use development in which commercial are combined/integrated with other uses.
- Promote Mission Valley as a regional retail center.
- Provide a full range of retail uses.
- Encourage visitor-oriented commercial development.
- Encourage continuation of existing and development of new commercial-recreation uses, particularly along the San Diego River.
- Encourage good design in new commercial development.

Proposals

- Provide neighborhood/convenience commercial facilities near, or as part of, residential developments.
- Encourage the combining of commercial and other uses.
- Encourage commercial-office development which includes personal services for employees such as cafeterias, barbers, dry cleaners, etc.
- Encourage commercial-recreation uses and other related uses (restaurants, sports facilities and equipment, specialty shops, etc.) to locate adjacent to the river.

Development Guidelines

- Provide parking garages as an integral part of new development utilizing ground level spaces for retail activity.
- Locate neighborhood/convenience uses toward the center of residential areas to promote pedestrian and/or bicycle accessibility.
- Connect various developments (new and existing) by transit, pedestrian and/or bicycle routes to discourage intra-implementing auto traffic.
- Residential development should be in the form of generally self-contained areas. The following proposals are intended to achieve this concept:

1. Provide amenities intended primarily for use by residents. These amenities should include:

    a. Leisure activity areas.

    b. Active recreational facilities.

    c. Child care centers.

    d. Neighborhood and convenience shopping and professional office complexes.

    e. Cultural/educational opportunities.

    f. Community facilities and services.

2. Design internal circulation paths to reduce dependency on the automobile and minimize conflicts among pedestrian, bicycle and automobile traffic.

3. Encourage a mix of housing types and densities, integration of commercial uses and flexibility in site arrangement.

4. Discourage visitor-oriented uses from locating within residential areas to minimize conflicts between residents and tourists. These include:

    a. Lodging facilities.

    b. Outdoor amusements.

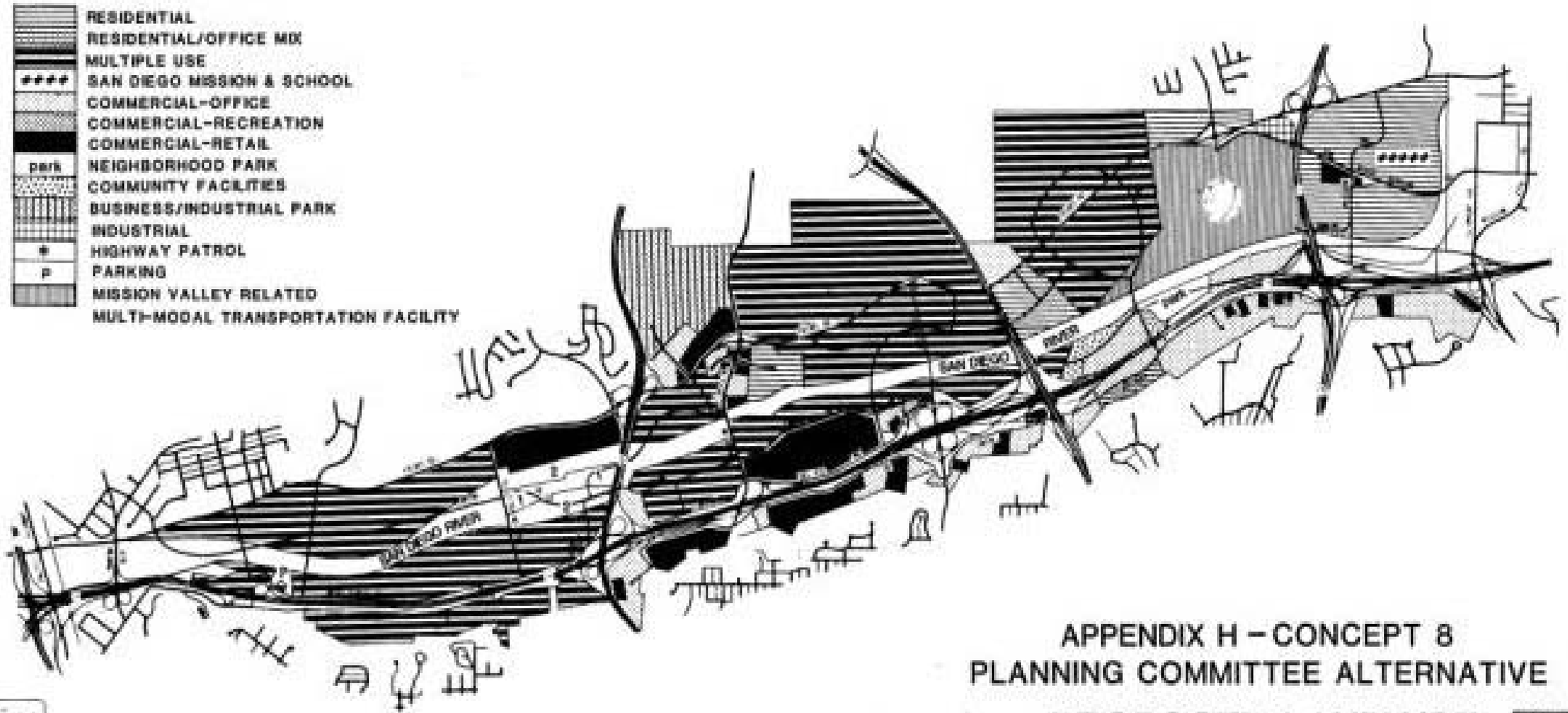
    c. Theaters.

    d. Other uses that tend to draw traffic from outside the community.

- Large scale development (commercial, office, or commercial-recreation) at the base of the south slopes should be allowed to extend above the 150-foot elevation contour on the southern slopes.

Concept 8 - Parks and Recreation

The major concentrations of residential development in the community are located at the western and eastern ends of the Valley. A new YMCA (Young Men's Christian Association) facility was recently completed at the western end of the Valley on Friars Road. This facility (developed on leased city-owned land) provides both indoor and outdoor recreational facilities: one, at the eastern end of the Valley, on Rancho Mission Road near the river; and, the second, at the western end of the Valley on Hotel Circle North. The need for active and passive recreational opportunities will increase as residential development increases in the Valley.


RESIDENTIAL
RESIDENTIAL/OFFICE MIX
MULTIPLE USE
SAN DIEGO MISSION & SCHOOL
COMMERCIAL-OFFICE
COMMERCIAL-RECREATION
COMMERCIAL-RETAIL
park NEIGHBORHOOD PARK
COMMUNITY FACILITIES
BUSINESS/INDUSTRIAL PARK
INDUSTRIAL
* HIGHWAY PATROL
P PARKING
MISSION VALLEY RELATED
MULTI-MODAL TRANSPORTATION FACILITY
SAN DIEGO
SAN DIEGO RIVER
APPENDIX H – CONCEPT 8
PLANNING COMMITTEE ALTERNATIVE
PROPOSED LAND USE
MISSION VALLEY COMMUNITY PLAN
FIGURE
H-1
CITY OF SAN DIEGO
PLANNING DEPARTMENT

The project residential population indicates a need for active recreational parks in addition to what is currently provided by the YMCA and Sefton Little League Field.

Objective

- Provide adequate park and recreation areas on presently owned public real property for the use of Mission Valley residents.

Proposals

- Construct and develop two public parks on the City-owned land: one adjacent to the YMCA in the western portion of the Valley and the other on a parcel bounded by Milly Way on the west, Camino de la Reina on the south and the floodway on the north.

- Utilize the San Diego River corridor for passive recreation.

- Coordinate with private recreational facilities and commercial interests so that the private facilities complement and supplement the public recreational system.

- Expand the existing sports facility abutting the stadium parking lot.

Development Guidelines

- Combine appropriate passive recreational use of wildlife and/or wetland conservation areas and water resources.

- Provide common landscaped open areas in new developments for recreational use by occupants of the developments.

- Use park fees for the two public parks to be built on City property.

- Each park should be as large as feasible with reference to the site available. The park adjacent to the YMCA should consist of open lawn areas and jogging trails. The other park should include open lawn areas, multi-purpose playing fields, jogging trails, slides, swings, bars and restrooms.

Concept 8 - Development Intensity

The purpose of the development intensity element is to provide a method to equitably balance and distribute future land use intensification in Mission Valley.

Mission Valley is an important commercial center for the entire City of San Diego. It is now the City's major retail center, as well as the focus of much of the City's commercial recreation and commercial office development.

In dealing with development intensity, a balance must be achieved between a variety of competing interests. These include the interests of the owners and occupants of presently developed commercial property, residents of the community, property owners with land which will accommodate future development, and the citizens of the entire San Diego community who make use of the regional commercial facilities for business, trade, entertainment and recreation.

Concept 8 addresses such concerns as provision for an adequate transportation system and flood protection along the lower reaches of the San Diego River. Concept 8 envisions that these problems will be met and resolved on a continuing basis through the cooperative efforts of Mission Valley property owners and the responsible governmental agencies. The Planning Committee believe that the resolution of problems such as traffic circulation must be continuing, innovative and concurrent with developmental as contemplated by Concept 8. Responsible planning mandates that the designated problems be resolved to accommodate responsible development, not used as an excuse to curb the right of property owners to utilize their property, now or in the future, in accordance with the Plan's land use element.

The Committee recognizes that totally unlimited development in the Valley would unnecessarily exacerbate the identified problems. Similarly, unreasonable restrictions on development would create stagnation in this major commercial center and place Mission Valley at a competitive disadvantage with other commercial areas of the City.

The Committee is cognizant of the fact that Mission Valley already encounters some disadvantages in competing with other commercially competitive areas within the City of San Diego. As revealed in the community facilities element of the Plan, virtually no public facilities have been provided for Mission Valley, while large commitments of public funds are continually made to downtown redevelopment. No such commitment of redevelopment funds is needed for Mission Valley, but in equity, no unreasonable restrictions should be imposed on commercial development in the community plan area.

The Committee's inquiry as to control the development intensity has led to consider two possible methods. The first of these is a proposal to limit development by means of assigning development rights to parcels or property on the basis of the City's traffic count studies (average daily trips). The Committee has rejected this method because the best evidence available establishes that such studies are not scientific or reliable, are speculative in nature and, if applied, would result in a down-zoning of Mission Valley properties.

The second approach to development intensity would regulate intensity by means of traditional zoning ordinances. The Committee has opted for this approach as best adapted to achievement of the Plan's goal: a multiple use approach to development with emphasis on an integration of commercial retail, commercial recreation, office and residential uses. The multiple use concept will, in itself, be effective in dealing with the Valley's traffic problems by reducing the traffic volumes which could be expected from comparably sized single use development. Different land uses produce different traffic loads, particularly at peak hours, and multi-use will tend to minimize traffic congestion.

The Committee also believes that the implementation ordinance, included in the Plan as Appendix B, strikes an appropriate balance between the regulatory function of planning and the function of the market place in achieving the goal of an integrated multiple use development in Mission Valley.

The Committee's study has reviewed the existing zoning ordinances in force in the City of San Diego which accommodate commercial development and/or impose limitations thereon. In present ordinances, limitations on development intensity are generally achieved through imposition of a floor area ratio, a lot coverage limitation and/or a requirement for specified parking spaces. For instance, in the San Diego downtown area business properties are zoned either C (Commercial) or CBD (Central Business District). The CBD Zone has no floor area requirement, no coverage limitation, no parking requirement and no landscaping requirement. The C Zone has a floor area ratio of two, no coverage limitation on the lot, no parking requirement and no landscaping requirement.

Business properties in Mission Valley are, at the present time, generally found in one of three zones: CA (Commercial Area; area shopping center), CR (Commercial Recreation), or CO (Commercial Office). Other properties now being utilized for business purposes are functioning under variances and/or conditional use permits. The CA and CO zones have a floor area ratio of two, and the CR Zone has a floor area ratio of one. The CA and CO zones applicable to Mission Valley have a coverage limitation of 50 percent for an interior lot and 60 percent for a corner lot. The CR Zone has a 35 percent coverage limitation.

In the CA, CO and CR zones, parking requirements vary from one parking space per 200 square feet of floor space to one parking space per 400 square feet of floor space.

In achieving a balance between the interests of property owners in developing their land and the interests of the community in regulating development intensity, the Committee believes a proper balance will be struck through an implementation ordinance more restrictive than the commercial zoning now applicable to the downtown area, but specifically encouraging the integrated multiple use development for Mission Valley which is the intent of Concept 8.

The Committee proposes that an ordinance be adopted creating a new zone to be known as “Commercial Area 2” (CA2). This zone, which would specifically permit the multiple uses contemplated by Concept 8 would be applied to properties currently in commercial use and properties for which future commercial use is now contemplated, unless the property owner elected to retain the existing zoning applicable to the property. The CA2 Zone would include in one simplified zoning category the areas now zoned CA, CO, and CR, unless the property owner elected to retain the present zoning, as well as those properties in other zones where CA2 zoning is requested by the property owners. At the time a parcel of property is placed in the CA2 Zone, the property owner may, but shall not be required to, indicate one or more of the permitted uses in the zone for which the owner intends to utilize the property.

1. The purpose and intent section of the CA2 ordinance includes most of the purposes and intent clauses now found in the CA, CO and CR zoning ordinances.

2. Permitted uses are those set forth in the present ordinance establishing the CA, CO, CR, C and CN zones. The purposes include, among other things, various goods retail

goods establishments, hotels and motels, various recreational facilities, private clubs, restaurants, theatres and business and professional offices. Permitted uses in the CA2 Zone also include residential development in accord with the integrated use goal of the community plan.

3. The minimum lot dimension in the CA2 Zone is 10,000 square feet, as in the present CA Zone. The ordinance includes the exception currently found in CA, CO and CR zoning ordinances which state: “Any lot which qualifies under the definition of a lot as set forth in this code and which does not comply in all respects with the minimum lot dimensions specified herein may, nevertheless, be used as permitted and otherwise regulated by the provisions applicable to this zone.”

4. The minimum yard requirement is similar to that in the present CO Zone (Front of 15 feet, etc.).

5. The CA2 Zone includes a maximum floor area ratio (FAR) of two, the same as in the present CO and CA zones. By placing all of the potential uses under the same floor area ratio requirement, a multiple use is encouraged, by eliminating an FAR advantage by selection of one form of development as opposed to other approved uses. In determining floor area ratio, a property owner may include in his computations portions of his land adjacent to the development which are included in the FW Zone, the FPF Overlay Zone, or the Hillside Overlay Zone.

6. No maximum coverage requirement is included in the CA2 Zone, as adequate limitation is achieved through the imposition of the floor area ratio.

7. Regulations for residential development are modified in the CA2 Zone, as opposed in the CA, CO and CR zoning ordinances, to encourage the integrated multiple use contemplated by the community plan.

8. Landscaping requirements in the CA2 Zone are comparable to those found in the present CA, CO and CR zoning ordinances.

9. Off-street parking requirements in the CA2 Zone shall be those set forth in detail in the proposed CA2 zoning ordinance, included in the following pages. Any portion of a facility devoted to meeting the off-street parking requirements shall not be counted in determining floor area.

The Committee is cognizant that a number of property owners in Mission Valley have parcels not now available for commercial development, but upon which commercial development is contemplated in the future. The Committee has considered the right of property owners to develop their land in future years in accord with the Plan's concepts and requirements, as well as immediate development rights.

As part of the implementation process, zoning within the community plan area must be brought into conformity with Concept 8. **Figure 3** reflects a harmonization of Concept 8’s goals with the expressed desires of the Valley’s present property owners.

The Committee proposes that as part of the implementation process, a general rezoning of

Mission Valley properties be enacted in accord with the land use designations on **Figure 3** to bring: 1) zoning in Mission Valley into conformity with the Plan; 2) permit property owners to place their properties in the CA2 Zone, whether or not immediate commercial development of the property is contemplated; and, 3) accomplish the rezoning without the necessity for joining the rezone application with a specific indication of the proposed usage (such as a PCD, PRO, or tentative map). A general rezone of Valley properties, in implementation of the Plan, also places all property owners on a plane of equality with regard to zoning, irrespective of the point in time at which commercial development of specific properties is contemplated.

Objective

- To equitably balance and distribute future land use intensification.

Proposals

- Control of development intensity through traditional zoning concepts and the normal function of the marketplace.
- Adoption of an ordinance providing for a new Commercial Area 2 (CA2) Zone to encourage a pattern of integrated multiple use development in Mission Valley.
- A general rezone of Mission Valley, in implementation of the Plan, to bring zoning into conformity with Concept 8.

Concept 8 – Transportation Improvement Phasing

The Mission Valley traffic forecasts have identified the ultimate improvements to the transportation network that will be needed in the Valley. Each of these improvements has been phased, based upon the amount of development that occurs in different areas of Mission Valley. As development proceeds in these various areas, street and ramp improvements will be required at certain stages.

Equivalent dwelling units (EDU) have been selected to translate different types of development into a common denominator. The EDU factor for each type of land use in Mission Valley is listed in **Table 7**. In order to monitor the EDUs in Mission Valley, the Valley was divided into 12 sectors, basically along the San Diego River and the north-south freeways (Phasing Sector Map). These sectors were grouped together according to which street or ramp improvements will be required because of development of those areas

(**Table 7** and **Figure 28**). Table 7 indicates the maximum amount of EDUs that can be developed within a group of sectors before certain street improvements are necessary.

These EDU totals exclude any projects that are underway or have approved tentative or final maps. If a new project replaces an existing land use, only the differences in EDUs between the new and old use should be counted in monitoring total EDUs. Notice that some of the groups have several levels of development that require different road improvements.

When an EDU threshold is reached which triggers the need for an improvement in a sector, the City should initiate such action as may be required to assure that the cost of the

improvement is apportioned to all properties which will benefit from the improvement, rather than place the entire burden of the improvement on a pending development.

The phasing of transportation improvements by means of EDUs does not constitute a limitation on development by means of a traffic court, but merely provides for the orderly implementation, as needed, of the improvements to the circulation system included in the Plan.

CONCEPT 8 - MISSION VALLEY UNIFIED PLANNING COMMITTEE - IMPLEMENTATION ALTERNATIVE

PROPOSED CA2 ZONING ORDINANCE

Sec. CA2 Zoning Ordinance

A. PURPOSE AND INTENT

The CA2 Zone is primarily intended to provide for mixed use development with emphasis on an integration of commercial retail, commercial recreation, office and residential uses. The Zone is intended to accommodate all of the following:

1. Establishments catering to the lodging, dining and recreational needs of tourists and others, characterized by a diversity of recreational facilities;

2. Business and professional offices and certain allied services normally associated with such offices;

3. Community and regional shopping centers, which typically serve large areas of the City;

4. Residential development to encourage a mixture of residential and commercial uses within the CA2 Zone.

5. Shopping areas that provide convenience goods and services for residential neighborhoods.

B. PERMITTED USES

In the CA2 Zone, no building or improvement, or portion thereof shall be erected, constructed, converted, established, altered or enlarged, nor shall any premises be used for one or more of the following purposes:

1. Hotels and motels.

2. Recreational facilities, including but not limited to:

   a. Golf courses, including miniature courses and driving ranges.

   b. Recreation centers.

c. Swimming pools, gymnasiums and health centers.

d. Tennis, badminton, volleyball, and similar courts.

e. Skating rinks.

f. Bowling lanes.

g. Riding stables.

h. Marinas.

3. Apartments, condominiums and other residential developments.

4. Regional shopping centers.

5. Shopping centers designed to provide convenience goods and services for residential neighborhoods.

6. Private clubs, lodges and fraternal organizations.

7. Restaurants and bars with incidental entertainment and dancing.

8. Theaters, including open-air theaters.

9. Public utility electric distribution substations, gas regulators and communications equipment buildings developed in accordance with building and landscaping plans approved by the Zoning Administrator.

10. Parking lots - commercial.

11. Public parks, public playgrounds.

12. Accessory uses for any of the foregoing permitted including but not limited to the following:

    Business services customarily catering to hotel and motel guests and apartment occupants. These may include sales of newspapers and magazines, tobacco and packaged liquor; barber and beauty shops; florists and gift shops; agencies for laundering, dry cleaning and pressing; agencies for tickets, travel and car rentals.

13. Business and professional office uses. Such uses may include accountants, advertising agencies, architects, attorneys, contractors, doctors, engineers, financial institutions, insurance agencies, medical clinics (no overnight patients), photographers, real estate brokers, securities brokers, surveyors and graphic artists.

14. Retailing of goods and dispensing of services from the following establishments:

    a. Addressing, secretarial and telephone answering services.

b. Ambulance service.

c. Antique shops.

d. Apparel shops.

e. Automobile and truck sales and rental agencies (usable vehicles only).

f. Automobile wash establishments.

g. Automobile paint and repair shops, including body and fender work if entirely within an enclosed building.

h. Bakeries.

i. Beauty shops.

j. Bicycle shops.

k. Boat Sales agencies.

l. Book stores.

m. Building material stores, provided that any open storage areas are completely enclosed by walls or buildings or a combination thereof; said walls and buildings shall not be less than six feet in height, and provided also there shall be no outdoor storage of merchandise, material, equipment or other goods to a height greater than that of any enclosing wall of building.

n. Business machine sales display and service.

o. Confectionaries.

p. Curtain and drapery shops.

q. Dairy stores, including drive-in.

r. Drafting and blueprint service.

s Dry cleaning establishments (no truck delivery of finished cleaning).

t. Dry cleaning and laundry agencies and self-service dry cleaning and laundry establishments.

u. Dry goods stores and pharmacies.

v. Electronic data processing, tabulating and record keeping services.

w. Employment agencies.

x. Equipment and tool rental establishments (no man-ridden equipment).

y. Feed stores.

z. Financial institutions.

aa. Florists.

bb. Food stores.

cc. Frozen food lockers.

dd. Funeral Parlors.

ee. Furniture stores.

ff. Hardware stores excluding sale of used building materials, used appliances, and used plumbing supplies.

gg. Hobby shops.

hh. Ice delivery stations.

ii. Jewelry stores.

jj. Leather goods and luggage shops.

kk. Liquor stores.

ll. Locksmith shops.

mm. Medical appliance sales.

nn. Moving and household storage facilities.

oo. Music stores.

pp. Newspaper plants.

qq. Nurseries-plant.

rr. Office furniture and equipment sales.

ss. Paint and wallpaper stores.

tt. Pawn shops.

uu. Pet shops.

vv. Photographic equipment, supplies, and film processing stores.

ww. Photographic studios.

xx. Post offices.

yy. Radio and television broadcasting studios.

zz. Radio, television and home appliance repair shops.

aaa. Shoe repair shops.

bbb. Shoe stores.

ccc. Sporting goods stores.

ddd. Stationers.

eee. Studios for teaching of art, drawing and music.

fff. Tire sale, repair and recapping establishments if entirely within an enclosed building.

ggg. Trade and business schools.

hhh. Trailer sales agencies.

iii. Transportation terminals.

jjj. Travel bureaus.

kkk. Variety stores.

15. Labor unions (no hiring halls) and trade associations.

16. Medical, dental, biological and x-ray laboratories.

17. Any other use which the Planning Commission may find to be similar in character to the uses, including accessory uses, enumerated in this section and consistent with the purpose and intent of this zone. The adopted resolution embodying such finding shall be filed in the office of the City Clerk.

18. Accessory uses for any of the foregoing permitted uses including on-premises signs constructed, fabricated, erected, installed, attached, fastened, placed, positioned, operated and adapted in accordance with the regulations as set forth in Chapter X, Article 1, Division 11, and Chapter IX, Article 5, Division 1 of this code.

19. At the time a parcel of property is placed in the CA2 Zone, the property owner may, but shall not be required to, indicate one or more of the permitted uses in the zone for which the owner intends to utilize the property.

C. SPECIAL REGULATIONS

All accessory uses shall be located in the same building as the permitted use or uses which they serve. There shall be no entrance to any such accessory uses except through a foyer, court, lobby, patio, or other similar area. However, neither of the foregoing regulations shall be applicable to signs or accessory uses exclusively serving outdoor recreational activities.

D. PROPERTY DEVELOPMENT REGULATIONS

No building or portion thereof shall be erected, constructed, converted, established, altered, enlarged, used, nor shall any premises be used unless the lot or premises and buildings shall comply with the following regulations and standards:

1. Minimum Lot Dimension.

    a. Area - 10,000 square feet.

    b. Street Frontage - 50 feet, except that for any lot which fronts principally on a turnaround or on a curving street line having a radius of less than 100 feet, the minimum frontage shall be 30 feet.

    c. Width - 50 feet.

    d. Exception. Any lot which qualifies under the definition of a lot as set forth in this code and which does not comply in all respects with the minimum lot dimensions specified herein may nevertheless be used as permitted and otherwise regulated by the provisions applicable to this zone.

2. Minimum Yards.

    a. Front-15 feet, except that for any portion of a lot which fronts on a turnaround or on a curving street line having a radius of less than 100 feet, the minimum frontage shall be ten feet.

    b. Side.

        (1) Interior - ten feet.

        (2) Street - 15 feet, except that the minimum shall be:

            (a) Nine feet for any lot having a width of 45 feet but less than 50 feet.

            (b) Eight feet for any lot having a width of 40 feet but less than 45 feet.

            (c) Seven feet for any lot having a width of 35 feet but less than 40 feet.

(d) Six feet for any lot having a width of 30 feet but less than 35 feet.

(e) Five feet for any lot having a width of less than 30 feet.

c. Rear - 15 feet.

d. Exceptions to Front Yard and Street Side Yard Regulations. Off-Street Yard Regulations. Off-street parking may be located within the required front and street side yards adjoining the required landscaped strip abutting public streets rights-of-way.

3. Maximum Floor Area Ratio

The maximum floor area ratio shall be two.

In determining floor area ratio, a property owner may include in his computations portions of his land adjacent to the development which are included in the FW Zone, the FPF Overlay Zone, or the Hillside Review Overlay Zone.

4. Regulations for Residential Development.

No lot shall be occupied by more than one dwelling unit for each 1,000 square feet of lot area.

All buildings, improvements or portions thereof, erected, constructed, covered, established altered or enlarged in this zone which are designated or intended for living purposes shall observe minimum front, side or rear yards, and floor area ratio set forth in this ordinance.

5. Landscaping.

Prior to the use and occupancy of any premises, a strip of land within said premises abutting public street rights-of-way (except for approved ways of egress) shall be suitably landscaped with shrubs, trees, and ornamental ground cover. Said strip shall have a minimum depth of five feet and an area equal in square feet to ten times the length of the property line abutting public street rights-of-way (except for approved ways of ingress and egress). Any portion of said landscaped strip which exceeds 25 feet in depth shall not be included in calculating the required area. Prior to the issuance of any building permits, a complete landscaping plan shall be submitted to the Zoning Administrator for approval; said landscaping plan shall be in substantial conformance with standards and specifications adopted by the Planning Commission as set forth in the document entitled, “Developmental Standards and Operational Standards - Landscaped Strips,” on file in the office of the Planning Department. Substantial conformance shall be determined by the Zoning Administrator; said determination shall be subject to appeal in the manner set forth in Chapter X, Article 1, Division 5 of the San Diego Municipal Code.

Landscaping and required watering systems shall be installed prior to the use of the premises. All landscaping material in required landscaped areas shall be permanently maintained in a growing and healthy condition, including trimming, as appropriate to the landscaping material in accordance with the "Developmental Standards and Operational Standards - Landscaped Strips" referred to above.

6. Other applicable property development regulations are contained in Division 6 of this Article.

E. OFF-STREET PARKING REGULATIONS

1. Every premises used for one or more of the permitted uses listed in paragraph "B." above shall be provided with a minimum of off-street parking spaces on the same lot or premises as follows:

   a. For apartments, multiple dwelling and group dwellings, 1.3 parking spaces for each dwelling unit containing not more than one bedroom, and 1.6 parking spaces for each dwelling unit containing two or more bedrooms.

   b. For hotels and motels, one parking space for each guest room, and one space for each 500 square feet of gross floor area used for meeting or banquet functions.

   c. For private clubs and similar establishments, one parking space for each guest room or one parking space for each 400 square feet of gross floor area, whichever is greater.

   d. For areas used for banquet rooms, dining, dancing, or the serving of drinks, except as provided in E.1.b., one parking space for each 80 square feet of gross floor area.

   e. For golf courses and golf driving ranges, ten parking spaces for each fairway and one for each range tee.

   f. For each play or game court (tennis, handball, etc.), one parking space for each player authorized to participate at one time under the rules of the Amateur Athletic Union.

   g. For gymnasiums and swimming pools, one parking space for each 250 square feet of gross floor area and one parking space for each 35 square feet of water area.

   h. For bowling lanes, seven parking spaces for each alley.

   i. For marinas, three parking spaces for each five boat slips.

   j. For theaters other than drive-in theaters and places of assembly not otherwise provided for in this section, one parking space for each three fixed seats, or one space for each 21 square feet of gross floor area where there are no fixed seats.

k. For incidental or accessory businesses and office, one parking space for each 400 square feet of gross floor area.

l. Parking required under paragraph E.1.e. through E.1.i. above may be reduced by 50 percent if the subject facilities are accessory to a hotel or motel.

m. For regional shopping centers and shopping centers designed to provide convenience goods and services for residential neighborhoods, one parking space for each 200 feet of gross floor area.

n. For medical and dental buildings, one parking space for each 250 square feet of gross floor area.

o. For business and professional office uses, and all other permitted uses not otherwise provided for in the CA2 Zone (except distribution substations and gas regulators) one parking space for each 300 square feet of gross floor area.

2. Where ambiguity exists in the application of these off-street parking requirements, or where any use not specified in paragraph "B." above is found to be a permitted use, the off-street parking requirement shall be consistent with that for similar uses in this zone.

3. Any portion of a facility devoted to meeting the off-street parking requirement in the CA2 Zone shall not be counted in determining floor area for purposes of computing the floor area ratio specified in paragraph D.3 of this ordinance.

4. All off-street parking facilities shall be constructed, operated and maintained in compliance with Division 8 of this Article.

Note: Appendix "~~H~~ G" is provided only for informational purposes. It is an implementation proposal recommended by the Mission Valley Unified Planning Committee as part of its recommended Concept 8. Concept 8 was not approved by the City Council on June 25, 1985, therefore, this information is included for background purposes only.